

Occurrence of Gibberellins in Vascular Plants, Fungi and Bacteria

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Abstract: The occurrence of GA₁ to GA₁₂₆ in vascular plants, fungi and bacteria is listed. The data are discussed with reference to criteria for identification and to the frequency of occurrence of GAs in vascular plants.

Key Words: Gibberellins A₁-A₁₂₆; natural occurrence; vascular plants; fungi; bacteria.

Introductions to publications on gibberellins (GAs) often state that the GAs are of widespread or universal occurrence but are unable to provide evidence for this general statement. This compilation provides such evidence of the occurrence of the currently known GAs (126) in vascular plants, fungi and bacteria. It is an updated version of information on the web:

(http://www.plant-hormones.bbsrc.ac.uk/gainplants/occurrence_of_gas_in_plants.htm;

<http://www.plant-hormones.bbsrc.ac.uk/gainplants/gasinfungi.htm>;

<http://www.plant-hormones.bbsrc.ac.uk/gainplants/gasinbacteriai.htm>).

In Table 1 the GAs are listed in numerical order. For each GA, the vascular plants in which that GA has been identified are listed in alphabetical order, together with the type of tissue in which the identification was made.

In Table 2 the vascular plants are listed in alphabetical order and the GAs that have been identified in the various types of tissue are listed.

In Tables 3 and 4 respectively the occurrence of GAs in fungi and bacteria is provided for completeness.

All of the currently known 126 gibberellins have been fully characterised by isolation of the pure compound from a natural source or by direct comparison with a standard obtained by rational synthesis. Their structures have been unequivocally determined on chemical and spectroscopic evidence. The orderly allocation of GA numbers to the natural GAs, instigated by MacMillan and Takahashi (1968), is being continued by Hedden and Kamiya (for details see http://www.plant-hormones.bbsrc.ac.uk/gainplants/gibberellin_nomenclature.htm).

The natural occurrence of GAs in plants was initially established by their isolation, mainly from immature seeds in which the amounts are high, and often by Herculean efforts. Since the early 1970s their identification from natural sources has relied mainly upon GC-MS data from purified, derivatised extracts and a comparison with reference GC-MS data. This method raises the question of the minimal data required for acceptable identification. The data in primary journals upon which identification is based

vary considerably. Authors and referees are, therefore strongly urged to apply, and publish, one of the following sets of criteria:

- (a) Isolation of the pure product and comparison of its chemical and physical properties with those of an authentic specimen;
- (b) full scan GC-MS comparing KRI data and m/z (and relative intensities) of at least 6 significant ions with those of standards;
- (c) GS-SIM comparing retention times and m/z (and relative intensities) of at least 6 significant ions with those of standards.

In the present case the following criteria for the identification of the GAs have been applied:

1. Only publications in refereed journals are cited;
2. identification from normal (tall) phenotypes is given preference;
3. preliminary communications are not cited where a full paper has been published;
4. GAs identified after hydrolysis of plant extracts are not included;
5. some papers, even though they are contained in refereed journals, have not been cited on the grounds that they are judged to contain insufficient data upon which to justify claimed identification.

The data in Tables 1-4 show the widespread natural occurrence of GAs (128 plants, 7 fungi and 7 bacteria). Table 1 shows that GA₁ is the most widespread (86 plants) and that its precursors in the early 13-hydroxylation pathway occur with increasing frequency from GA₅₃ (35 plants) to GA₄₄ (44 plants) to GA₁₉ (75 plants) to GA₂₀ (80 plants). A similar increasing sequence of occurrence of the members of the non-early 13-hydroxylation to GA₄ and GA₉ is evident, namely, GA₁₂ (21 plants) to GA₁₅ (25 plants) to GA₂₄ (25 plants) to GA₉ (50 plants) and GA₄ (54 plants). Gibberellin A₃, the major GA of *Gibberella fujikuroi*, has now been shown to occur in 45 plants.

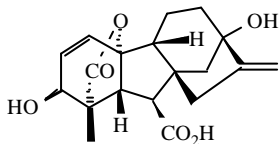
Table 1. Numerical List of Gibberellins and their Occurrence in Tissues of Vascular Plants

GA _n	Plant	Tissue	Refs
GA₁			
			
	<i>Abelmoschus esculentus</i>	immature seed	Koshioka and others (1996)
	<i>Agrostemma githago</i>	shoots and leaves	Jones, Zeevaart. (1980)
	<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
	<i>Alnus tenuifolia</i>	vegetative buds	Zanewich, Rood (1994)
	<i>Alstroemeria hybrida</i>	leaves	Kappers and others(1997)
	<i>Althaea rosea</i>	shoot apices	Harada, Nitch (1967)
	<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
		seeds	Derkx and others (1994)
	<i>Aralia cordata</i>	basal buds	Nishijima and others (1993)
	<i>Begonia x cheimanthus</i>	leaves	Oden, Heide (1988)
	<i>Betula pendula</i>	vegetative buds	Zanewich, Rood (1994)
	<i>Brassica napus</i>	stems	Rood et al. (1987)
		shoots	Hedden and others (1989)
		immature siliques	Zanewich, Rood (1993)
	<i>Camellia sinensis</i>	endosperm	Koshioka and others (1993)
	<i>Campanula isophylla</i>	leaves and stems	Jensen and others (1996)
	<i>Carica papaya</i>	fruits	Dathe and others (1991)
	<i>Carthamus tinctorius</i>	stems	Potter and others (1993)
	<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
	<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
	<i>Citrus sinensis</i>	shoots	Poling, Maier (1988)
		seeds	Turnbull (1989)
		buds, ovaries, fruit, shoots	Talon and others (1990a)
		immature fruit	Poling (1991)
	<i>Citrus unshiu</i>	water sprouts	Kawarada, Sumiki (1959)
		young fruit	Goto and others (1989)
		developing fruit	Talon and others (1992)
	<i>Corylus avellana</i>	seeds	Williams and others (1974)
	<i>Cucumis melo</i>	mature seeds	Hemphill and others (1972)
			Edelstein and others (1995)
	<i>Cucumis sativus</i>	mature seeds	Hemphill and others (1972)
	<i>Cucurbita maxima</i>	endosperm	Lange and others (1993a)
		embryo	Lange and others (1993b)
	<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
	<i>Daucus carota</i>	somatic cell embryo cultures	Noma and others (1979)
	<i>Dalbergia dolichopetala</i>	germinating seed	Moritz, Montiero (1994)
	<i>Dendranthema grandiflorum</i>	stem tips	Nishijima and others (1997)

<i>Eucalyptus globulus</i>	cambial region	Hasan and others (1994) Ridoutt and others (1995)
<i>Eustoma grandiflorum</i>	shoots + floral buds	Hisamatsu and others (1998b)
<i>Fragaria x ananassa</i> Duch.	leaves (short day) leaf exudate (short day) leaves (day neutral) immature fruit (day neutral)	Taylor and others (1994) Taylor and others (2000b) Taylor and others (2000a) Blake and others (2000b)
<i>Gentiana triflora</i>	stems and leaves	Koshioka and others (1998)
<i>Helianthus annuus</i>	immature seeds	Hutchison and others (1988)
<i>Hordeum vulgare</i>	germinating grain developing grain leaf sheaths seedlings	Yamada (1982) Gaskin and others (1984) Gaskin and others (1984) Boother and others (1991) Croker and others (1990) Boother and others (1991)
<i>Ipomoea batatas</i>	immature seed	Matsuo and others (1984)
<i>Ipomoea reptans</i>	immature seed	Matsuo and others (1984)
<i>Juglans regia</i>	pollinated ovaries unpollinated ovaries	Tadeo and others (1994) Tadeo and others (1994)
<i>Lactuca sativa</i>	shoots seedlings mature seeds	Waycott and others (1991) Toyomasu and others (1992) Toyomasu and others (1993)
<i>Lathyrus odoratus</i>	shoots	Ross and others (1990)
<i>Leucaena leucocephala</i>	immature seed	Arigayo and others (1983)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lupinus albus</i>	seeds	Gaskin and others (1992)
<i>Lycopersicon esculentum</i>	cultured roots seeds, pericarp pollinated fruit parthenocarpic fruit leaves + shoot tips unpollinated ovaries	Butcher and others (1988) Bohner and others (1988) Koshioka and others (1994) Koshioka and others (1994) Grunzweig and others (1997) Fos and others (2000)
<i>Malus domestica</i>	immature seed	Lin and others (1991) Hedden and others (1993)
<i>Mangifera indica</i>	leaves	Davenport and others (2001)
<i>Marah macrocarpus</i>	embryo	MacMillan, Gaskin (1996)
<i>Matthiola incana</i>	shoots + flower buds	Hisamatsu and others (1998a)
<i>Orobanche minor</i>	arial parts	Suzuki and others (1994)
<i>Oryza sativa</i>	ears	Suzuki and others (1981) Kobayashi and others (1984)
<i>Pennisetum glaucum</i>	shoots	Devi and others (1994)
<i>Pharbitis tricolor</i>	immature seeds	Matsuo and others (1984)

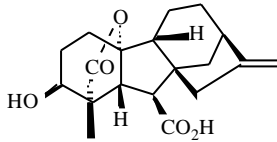
<i>Phaseolus coccineus</i>	immature seeds	MacMillan and Suter (1958) MacMillan and others(1960) Durley and others (1971) Bowen and others (1973) Albone and others (1984)
<i>Phaseolus coccineus</i> (continued)	light-grown seedlings embryo and testa cotyledonary embryo	Picciarelli, Alpi (1985) Picciarelli, Alpi (1986)
<i>Phaseolus lunatus</i>	suspensor	Dobert and others (1992a)
<i>Phaseolus vulgaris</i>	stems, root nodules immature seeds	West, Phinney (1959) West (1961) Hiraga and others (1974b) Yamane and others (1977)
<i>Phyllostachys bambusoides</i>	mature seeds	Hiraga and others (1974a,b)
<i>Phyllostachys edulis</i>	shoots	Yanagisawa and others (1992)
<i>Picea abies</i>	shoots	Yanagisawa and others (1992) Oden and others (1987) Moritz (1995)
<i>Picea sitchensis</i>	shoots	Moritz and others (1989)
<i>Pimpinella anisum</i>	somatic cell embryo cultures	Noma and others (1979)
<i>Pinus sylvestris</i>	stem and needles	Wang and others (1996)
<i>Pisum sativum</i>	shoot apices dark-grown shoots pods and seeds parthenocarpic ovaries pollinated ovaries	Ingram and others (1983), Gaskin and others (1985) Garcia-Martinez and others (1987a) Garcia-Martinez and others (1987a) Santes and others (1995) Garcia-Martinez and others (1987a) Garcia-Martinez and others (1991))
<i>Pithecellobium microcarpum</i>	pod, ovules immature seeds	Koshioka and others (1986)
<i>Polianthes tuberosa</i>	corms	Chang and others (2001)
<i>Populus tremuloides</i>	vegetative buds	Zanewich, Rood (1994)
<i>Prunus armeniaca</i>	immature seeds	Bottini and others (1985)
<i>Prunus avium</i>	fruitlets germinating seeds apices ex 10-wk seedlings apices ex mature plants	Blake, Browning (1994) Blake and others (2000a) Blake and others (2000a) Blake and others (2000a)
<i>Prunus spachiana</i>	shoots	Kobayashi and others (1996)
<i>Pseudotsuga menziesii</i>	shoots	Doumas and others (1992)
<i>Raphanus sativus</i>	mature seed leaves and stem	Nakayama and others (1990) Nakayama and others (1995)
<i>Rumex acetosa</i>	shoots	Rijinders and others (1997)
<i>Rumex palustris</i>	shoots	Rijinders and others (1997)
<i>Saccharum</i> spp	leaves, shoot apical meristem	Kuhnle and others (1983)
<i>Salix pentandra</i>	shoots, catkins roots	Davies and others (1985) Olsen and others (1994)
<i>Sasa kurilensis</i>	shoots	Yanagisawa and others (1992)
<i>Secale cereale</i>	plants	Eckert and others (1978)
<i>Secium edule</i>	endosperm, embryo, testa	Albone and others (1984)
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Sonneratia apelata</i>	leaves	Ganguly, Sircar (1974)

<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Trifolium repens</i>	arial parts	Suzuki and others (1994)
<i>Triticum aestivum</i>	leaves, roots	Eckert and others (1978)
	leaves, stems	Jensen, Junttila (1987)
	shoots	Appleford, Lenton (1991)
	internode & young ears	Webb and others (1998)
<i>Vitis vinifera</i>	seeds, seeded berries	Perez and others (2000)
<i>Vigna unguiculata / sinensis</i>	shoots	Garcia-Martinez (1987b)
	stems and nodules	Dobert and others (1992b)
	hypocotyls	Okatomoto and others (1995)
<i>Zea mays</i>	young tassels	Heupel and others (1985)
	shoots	Fujioka and others (1988a)
	pollen	Yamaguchi and others (1990)
	seeds	Murofushi and others (1991)
	callus ex embryo	Talo and others (1995)

GA₃

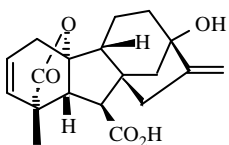
<i>Abelmoschus esculentus</i>	immature seed	Koshioka and others (1996)
<i>Althaea rosea</i>	shoot apices	Harada, Nitsch (1967)
<i>Arabidopsis thaliana</i>	seeds	Derkx and others (1994)
<i>Avena sativa</i>	inflorescences	Kaufman and others (1976)
<i>Brassica napus</i>	stems	Rood and others (1987)
	immature siliques	Zanewich, Rood (1993)
<i>Calystegia soldanella</i>	immature seeds	Matsuo and others (1984)
<i>Camellia sinensis</i>	endosperm	Koshioka and others (1993)
<i>Carica papaya</i>	fruits	Dathe and others (1991)
<i>Carthamus tinctorius</i>	stems	Potter and others (1993)
<i>Citrus sinensis</i>	fruitlets	Turnbull (1989)
<i>Cucumis melo</i>	mature seeds	Hemphill and others (1972)
		Edelstein and others (1995)
<i>Cucumis sativus</i>	mature seeds	Hemphill and others (1972)
<i>Dalbergia dolichopetala</i>	germinating seed	Moritz, Montiero (1994)
<i>Fragaria x ananassa</i> Duch.	immature fruit (day neutral)	Blake and others (2000b)
	leaves (day neutral)	Taylor and others (2000a)
	leaf exudates (short day)	Taylor and others (2000b)
<i>Hordeum vulgare</i>	germinating grain	Yamada (1982)
		Gaskin and others (1984)
	developing grain	Boother and others (1991)
	leaf sheaths	Croker and others (1990)
	shoots	Boother and others (1991)

<i>Ipomoea batatas</i>	immature seeds	Matsuo and others (1984)
<i>Ipomoea reptans</i>	immature seeds	Matsuo and others (1984)
<i>Lactuca sativa</i>	shoots	Waycott and others (1991)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lycopersicon esculentum</i>	cultured roots	Butcher and others (1988)
	leaves + shoot tips	Grunzweig and others (1997)
	unpollinated ovaries	Fos and others (2000)
<i>Lupinus albus</i>	seeds	Gaskin and others (1992)
<i>Malus domestica</i>	immature seeds	Lin and others (1991)
		Hedden and others (1993)
<i>Mangifera indica</i>	leaves	Davenport and others (2001)
<i>Marah macrocarpus</i>	endosperm, embryo	MacMillan, Gaskin (1996)
<i>Pennisetum glaucum</i>	shoots	Devi and others (1994)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Pharbitis tricolor</i>	immature seeds	Matsuo and others (1984)
<i>Phaseolus coccineus</i>	immature seeds	Durley and others (1971)
<i>Phaseolus lunatus</i>	stems, root nodules	Dobert and others (1992a)
<i>Picea abies</i>	shoots	Oden and others (1987), Moritz (1995)
<i>Picea sitchensis</i>	shoots	Moritz and others (1989)
<i>Pinus attenuata</i>	pollen	Kamienska and others (1976)
<i>Pinus sylvestris</i>	stem and needles	Wang and others (1996)
<i>Pisum sativum</i>	Pods, ovules	Garcia-Martinez and others (1991)
	pollinated ovaries	Santes and others (1995)
<i>Prunus avium</i>	fruitlets	Blake, Browning (1994)
	germinating seeds	Blake and others (2000a)
	apices ex 10-wk seedlings	Blake and others (2000a)
	apices ex mature plants	Blake and others (2000a)
<i>Prunus cerasus</i>	immature seeds	Nakayama and others (1996)
<i>Prunus persica</i>	immature seeds	Nakayama and others (2001)
<i>Pseudotsuga menziesii</i>	shoots	Doumas and others (1992)
<i>Saccharum spp</i>	leaves, shoot apical meristem	Kuhnle and others (1983)
<i>Secale cereale</i>	plants	Eckert and others (1978)
<i>Sechium edule</i>	endosperm, embryo, testa	Albone and others (1984)
<i>Triticum aestivum</i>	leaves, roots	Eckert and others (1978)
	leaves, stems	Jensen, Junttila (1987)
	shoots	Appleford, Lenton (1991)
	expanding internode	Webb and others (1998)
	young ears	Webb and others (1998)
<i>Vigna unguiculata /sinensis</i>	leaves + petioles + epicotyls	Garcia-Martinez and others (1987b)
	stems	Dobert and others (1992b)
<i>Vitis vinifera</i>	seeds, seeded berries	Perez and others (2000)
<i>Zea mays</i>	shoots	Fujioka and others (1988b)
	silk	Murofushi and others (1991)

GA₄

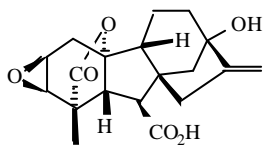
<i>Abelmoschus esculentus</i>	immature seed	Koshioka and others (1996)
<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Anemia phyllitidis</i>	sporophytes	Oyama and others (1996b)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
	seeds	Derkx and others (1994)
<i>Aralia cordata</i>	basal buds	Nishijima and others (1993)
<i>Begonia x cheimanthus</i>	leaves	Oden, Heide (1988)
<i>Brassica napus</i>	immature siliques	Zanewich, Rood (1993)
<i>Calystegia soldanella</i>	immature seeds	Matsuo and others (1984)
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus sinensis</i>	immature fruit	Poling (1991)
<i>Citrus unshiu</i>	young fruit	Goto and others (1989)
	developing fruit	Talon and others (1992)
<i>Cucumis melo</i>	mature seeds	Edelstein and others (1995)
<i>Cucumis sativus</i>	mature seeds	Hemphill and others (1972)
	40 and 61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Cucurbita maxima</i>	endosperm	Blechsmidt and others (1984)
	embryo	Lange and others (1993b)
<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
<i>Dalbergia dolichopetala</i>	germinating seed	Moritz, Montiero (1994)
<i>Daucus carota</i>	somatic cell embryo cultures	Noma and others (1979)
<i>Dicksonia antarctica</i>	sporophytes	Yamane and others (1988a)
<i>Dioscorea opposita</i>	dormant bulbils	Tanno and others (1992)
<i>Eucalyptus globulus</i>	cambial region	Ridoutt and others (1995)
<i>Helianthus annuus</i>	seeds	Hutchison and others (1988)
<i>Hordeum vulgare</i>	developing grain	Gaskin and others (1984)
<i>Juglans regia</i>	pollinated ovaries	Tadeo and others (1994)
	unpollinated ovaries	Tadeo and others (1994)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lupinus albus</i>	seeds	Gaskin and others (1992)
<i>Lycopersicon esculentum</i>	leaves + shoot tips	Grunzweig and others (1997)
<i>Malus domestica</i>	immature seeds	Lin and others (1991)
		Hedden et al (1993)
	developing seeds	Oyama and others (1996a)
<i>Marah macrocarpus</i>	endosperm	Beeley and others (1975)
	endosperm, embryo	MacMillan, Gaskin (1996)

<i>Matthiola incana</i>	shoots + flower buds	Hisamatsu and others (1998a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Orobanche minor</i>	erial parts	Suzuki and others (1994)
<i>Oryza sativa</i>	ears	Kobayashi and others (1984)
	spikelets	Kobayashi and others (1988)
<i>Phaseolus coccineus</i>	dark-grown seedlings	Crozier and others (1971)
	light-grown seedlings	Bowen and others (1973)
	cotyledonary embryo	Picciarelli, Alpi (1985)
	suspensor	Picciarelli, Alpi (1986)
<i>Phaseolus vulgaris</i>	immature seeds	Durley and others (1971)
		Hiraga and others (1974b)
		Yamane and others (1977)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Picea sitchensis</i>	shoots	Moritz and others (1989)
<i>Pimpinella anisum</i>	somatic cell embryo cultures	Noma and others (1979)
<i>Pinus attenuata</i>	pollen	Kamienska and others (1976)
<i>Pinus sylvestris</i>	stem and needles	Wang and others (1996)
<i>Pisum sativum</i>	internodes	Poole and others (1995)
	fertilized ovules	Rodrigo and others (1997)
<i>Pseudotsuga menziesii</i>	shoots	Doumas and others (1992)
<i>Raphanus sativus</i>	leaves, stem	Nakayama and others (1995)
<i>Rumex acetosa</i>	shoots	Rijinders and others (1997)
<i>Rumex palustris</i>	shoots	Rijinders and others (1997)
<i>Saccharum</i> spp	apical meristem	Koshioka and others (1984)
<i>Sechium edule</i>	endosperm, embryo	Albone and others (1984)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Trifolium repens</i>	erial parts	Suzuki and others (1994)
<i>Triticum aestivum</i>	leaves and stems	Jensen, Junttila(1987)
	expanding internode	Webb and others (1998)
	shoots	Appleford, Lenton (1991)
<i>Vigna unguiculata / sinensis</i>	hypocotyls	Okamoto and others (1995)
<i>Vitis vinifera x V. rupestris</i>	somatic embryos	Takeno and others (1983)
<i>Zea mays</i>	shoots	Fujioka and others (1988b)

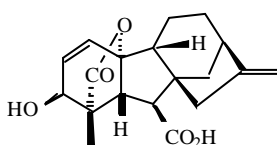
GA₅

<i>Dalbergia dolichopetala</i>	germinating seeds	Moritz, Montiero (1994)
<i>Fragaria x ananassa</i> Duch.	leaves (short day)	Taylor and others (1994)
	immature fruit (day neutral)	Blake and others (2000b)
<i>Ipomoea batatas</i>	immature and mature seeds	Matsuo and others (1984)

<i>Ipomoea reptans</i>	immature and mature seeds	Matsuo and others (1984)
<i>Lactuca sativa</i>	shoots	Waycott and others (1991)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Phaseolus coccineus</i>	immature seeds	MacMillan and others (1958, 1960) Durley and others (1971)
	light-grown seedlings	Bowen and others (1973)
	embryo and testa	Albone and others (1984)
	cotyledonary embryo	Picciarelli, Alpi (1985)
	suspensors	Picciarelli, Alpi (1986)
<i>Phaseolus vulgaris</i>	immature seeds	West, Phinney (1959) West (1961) Yamane and others (1977)
<i>Prunus armeniaca</i>	immature seeds	Bottini and others (1985)
<i>Prunus avium</i>	fruitlets	Blake, Browning (1994)
	germinating seeds	Blake and others (2000a)
	apices ex 10-wk seedlings	Blake and others (2000a)
	apices ex mature plants	Blake and others (2000a)
<i>Prunus persica</i>	immature seeds	Yamaguchi and others (1975a,b)
<i>Raphanus sativus</i>	mature seeds	Nakayama and others (1998)
<i>Quamoclit pennata</i>	seeds	Matsuo and others (1984)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Zea mays</i>	shoots	Fujioka and others (1988a)

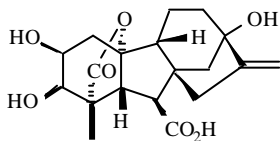
GA6

<i>Phaseolus coccineus</i>	immature seeds	MacMillan and others (1962) Durley and others (1971)
	embryo and testa	Albone and others (1984)
	cotyledonary embryo	Picciarelli, Alpi (1985)
	suspensors	Picciarelli, Alpi (1986)
<i>Phaseolus vulgaris</i>	immature seeds	Durley and others (1971) Yamane and others (1977)

GA7

<i>Calystigia soldanella</i>	seeds	Matsuo and others (1984)
<i>Daucus carota</i>	somatic cell embryo cultures	Noma and others (1979)

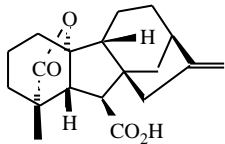
<i>Malus domestica</i>	immature seeds	Lin and others (1991) Hedden and others (1993)
	developing seeds	Oyama and others (1996a)
<i>Marah macrocarpus</i>	endosperm endosperm, embryos	Beeley and others (1975) MacMillan, Gaskin (1996)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Pimpinella anisum</i>	somatic cell embryo cultures	Noma and others (1979)
<i>Pinus attenuata</i>	pollen	Kamienska and others (1976)
<i>Pisum sativum</i>	fertilized ovules	Rodrigo and others (1997)
<i>Pseudotsuga menziesii</i>	shoots	Dumas and others (1992)
<i>Secium edule</i>	endosperm, embryos, testa	Albone and others (1984)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Triticum aestivum</i>	leaves + stems	Jensen, Junttila (1987)
<i>Zea mays</i>	shoots	Fujioka and others (1988b)

GA₈

<i>Abelmoschus esculentus</i>	immature seed	Koshioka and others (1996)
<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
<i>Alnus tenuifolia</i>	vegetative buds	Zanewich, Rood (1994)
<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Betula pendula</i>	vegetative buds	Zanewich, Rood (1994)
<i>Brassica napus</i>	shoots immature siliques	Hedden and others (1989) Zanewich, Rood (1993)
<i>Calonyction aculeatum</i>	immature seeds	Murofushi and others (1973)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Camellia sinensis</i>	endosperm leaves, fruitlets	Koshioka and others (1993) Turnbull (1989)
<i>Citrus sinensis</i>	shoots leaves, fruitlets	Poling, Maier (1988) Turnbull (1989)
<i>Citrus unshiu</i>	developing fruit	Talon and others (1992)
<i>Cucumis melo</i>	mature seeds	Edelstein and others (1995)
<i>Cucurbita maxima</i>	endosperm	Lange and others (1993a)
<i>Dalbergia dolichopetala</i>	germinating seed	Moritz, Montiero (1994)
<i>Eucalyptus globulus</i>	cambial region	Ridoutt and others (1995)

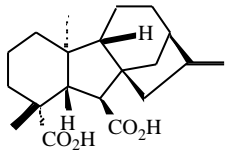
<i>Fragaria x ananassa</i> Duch.	leaves (short day) leaves (day neutral) immature fruit (day neutral)	Taylor and others (1994) Taylor and others (2000a) Blake and others (2000b)
<i>Hordeum vulgare</i>	developing grain leaf sheaths shoots	Gaskin and others (1984) Boother and others (1991) Croker and others (1990) Boother and others (1991)
<i>Juglans regia</i>	pollinated ovaries unpollinated ovaries	Tadeo and others (1994) Tadeo and others (1994)
<i>Lactuca sativa</i>	shoots	Waycott and others (1991)
<i>Lathyrus odoratus</i>	shoots	Ross and others (1990)
<i>Leucaena leucocephala</i>	immature seed	Arigayo and others (1983)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lycopersicon esculentum</i>	seeds, pericarp pollinated fruit parthenocarpic fruit leaves + shoot tips unpollinated ovaries	Bohner and others (1988) Koshioka and others (1994) Koshioka and others (1994) Grunzweig and others (1997) Fos and others (2000)
<i>Matthiola incana</i>	shoots + flower buds	Hisamatsu and others (1998a)
<i>Malus domestica</i>	immature seeds	Lin and others (1991)
<i>Pennisitum glaucum</i>	shoots	Devi and others (1994)
<i>Pharbitis nil</i>	immature seeds	Yokota and others (1971)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Phaseolus coccineus</i>	immature seeds	MacMillan and others (1962) Durley and others (1991) Albone and others (1984) Picciarelli, Alpi (1986)
<i>Phaseolus vulgaris</i>	testa suspensor immature seeds	Durley and others (1971) Hiraga and others (1974b) Yamane and others (1977)
<i>Pisum sativum</i>	mature seeds dark-grown shoots pods, seeds parthenocarpic ovaries pollinated ovaries	Hiraga and others (1974a) Gaskin and others (1985) Garcia-Martinez and others (1987a) Garcia-Martinez and others (1987a) Garcia-Martinez and others (1987a) Santes and others (1995)
<i>Populus tremuloides</i>	pods, ovules vegetative buds	Garcia-Martinez and others (1991) Zanewich, Rood (1994)
<i>Prunus avium</i>	apices ex 10-wk seedlings apices ex mature plants	Blake and others (2000a) Blake and others (2000a)
<i>Raphanus sativus</i>	mature seeds	Nakayama and others (1990)
<i>Salix pentandra</i>	roots	Olsen and others (1994)
<i>Secchium edule</i>	embryos and testa	Albone and others (1984)

<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Triticum aestivum</i>	shoots	Appleford, Lenton (1991)
	mature grain	Lenton and others (1994)
	expanding internodes	Webb and others (1998)
	young ears	Webb and others (1998)
<i>Vigna unguiculata / sinensis</i>	stems	Dobert and others (1992b)
<i>Zea mays</i>	young tassels	Heupel and others (1985)
	shoots	Fujioka and others (1988a,b)
	immature seeds	Murofushi and others (1991)

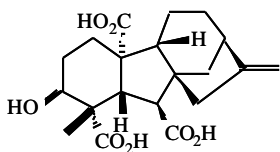
GA₉

<i>Abies alba</i>	needles	Christmann, Doumas (1998)
<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Althea rosea</i>	shoot apices	Harada, Nitsch (1967)
<i>Anemia phyllitidis</i>	sporophytes	Oyama and others (1996b)
	prothallia	Oyama and others (1996b)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
	seeds	Derkx and others (1994)
<i>Begonia x cheimantha</i>	leaves	Oden, Heide (1988)
<i>Brassica napus</i>	immature siliques	Zanewich, Rood (1993)
<i>Camellia sinensis</i>	leaves	Oyama and others (1999)
	xylem sap	Oyama and others (1999)
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus sinensis</i>	immature fruit	Poling (1991)
<i>Citrus unshiu</i>	young fruit	Goto and others (1989)
	developing fruit	Talon and others (1992)
<i>Corylus avellana</i>	seeds	Williams and others (1974)
<i>Cucumis sativus</i>	40 and 61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
<i>Dendranthema grandiflorum</i>	stem tips	Nishijima and others (1997)
<i>Dicksonia antarctica</i>	sporophytes	Yamane and others (1988a)
<i>Dioscorea opposita</i>	dormant bulbils	Tanno and others (1992)

<i>Eriobotrya japonica</i>	immature seeds	Koshioka and others (1988)
	immature seeds	Yuda and others (1992)
<i>Eucalyptus globulus</i>	cambial region	Ridoutt and others (1995)
<i>Hordeum vulgare</i>	developing grain	Boother and others (1991)
<i>Juglans regia</i>	pollinated ovaries	Tadeo and others (1994)
	unpollinated ovaries	Tadeo and others (1994)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lycopersicon esculentum</i>	pollinated fruit	Koshioka and others (1994)
	unpollinated ovaries	Fos and others (2000)
<i>Lygodium circinnatum</i> (as Me ester)	prothallia	Yamauchi and others (1996)
<i>Lygodium japonicum</i> (as Me ester)	prothallia	Yamane and others (1979)
<i>Malus domestica</i>	immature seeds	Lin and others (1991)
		Hedden and others (1993)
	developing seeds	Oyama and others (1996a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Orobancha minor</i>	erial parts	Suzuki and others (1994)
<i>Oryza sativa</i>	ears	Kobayashi and others (1984)
<i>Picea abies</i>	shoots	Oden and others (1987)
		Moritz (1995)
<i>Picea sitchensis</i>	shoots	Moritz and others (1989)
<i>Pinus sylvestris</i>	stems	Wang and others (1996)
<i>Pisum sativum</i>	immature seeds	Frydman and others (1974)
<i>Pithecellobium microcarpum</i>	immature seeds	Koshioka and others (1986)
<i>Pseudotsuga menziesii</i>	shoots	Doumas and others (1992)
<i>Prunus persica</i>	immature seeds	Nakayama and others (2001)
<i>Raphanus sativus</i>	mature seed	Nakayama and others (1990)
	leaves, stems	Nakayama and others (1995)
<i>Rumex acetosa</i>	shoots	Rijinders and others (1997)
<i>Rumex palustris</i>	shoots	Rijinders and others (1997)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Trifolium repens</i>	erial parts	Suzuki and others (1994)
<i>Triticum aestivum</i>	expanding internodes	Webb and others (1998)
<i>Vigna unguiculata / sinensis</i>	hypocotyls	Okamoto and others (1995)
<i>Vitis vinifera xVitis rupestris</i>	somatic embryos	Takeno and others (1983)
<i>Zea mays</i>	shoots	Fujioka and others (1988b)
	pollen	Yamaguchi and others (1990)
	immature seeds	Murofushi and others (1991)

GA12

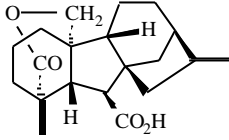
<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Camellia sinensis</i>	xylem sap	Oyama and others (1999)
<i>Cucumis sativus</i>	61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Cucurbita maxima</i>	endosperm	Blechs Schmidt and others (1984)
<i>Dioscorea opposita</i>	dormant bulbils	Tanno and others (1992)
<i>Fragaria x ananassa</i> Dutch	immature fruit (day neutral)	Blake and others (2000b)
<i>Hordeum vulgare</i>	developing grain	Gaskin and others (1984)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lilium longiflorum</i>	pollen	Abe and others (1991)
<i>Malus domestica</i>	immature seeds developing seeds	Hedden and others (1993) Oyama and others (1996a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Orobancha minor</i>	arial parts	Suzuki and others (1994)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Pinus sylvestris</i>	stems	Wang and others (1996)
<i>Raphanus sativus</i>	stems	Nakayama and others (1995)
<i>Secchium edule</i>	testa	Albone and others (1984)
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Zea mays</i>	shoots	Fujioka and others (1988a,b)

GA13

<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Cucurbita maxima</i>	endosperm,embryo	Blechs Schmidt and others (1984)

<i>Marah macrocarpus</i>	embryo	MacMillan, Gaskin (1996)
<i>Pisum sativum</i>	pollinated ovaries	Santes and others (1995)
<i>Sechium edule</i>	endosperm and testa	Albone and others (1984)

GA15

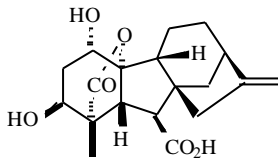
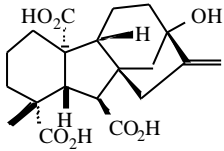


<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Anemia phyllitidis</i>	sporophytes	Oyama and others (1996b)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Aralia cordata</i>	basal buds	Nishijima and others (1993)
<i>Brassica napus</i>	shoots	Hedden and others (1989)
<i>Camellia sinensis</i>	xylem sap	Oyama and others (1999)
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Cucumis sativus</i>	40 and 61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
<i>Dicksonia antarctica</i>	sporophytes	Yamane and others (1988a)
<i>Eriobotrya japonica</i>	immature seeds immature seeds	Koshioka and others (1988) Yuda and others (1992)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lycopersicon esculentum</i>	seeds pollinated fruit	Bohner and others (1988) Koshioka and others (1994)
<i>Malus domestica</i>	immature seeds xylem exudate	Lin and others (1991) Hedden and others (1993) Motosugi and others (1996)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Prunus spachiana</i>	shoots	Kobayashi and others (1996)
<i>Raphanus sativus</i>	leaves, stem	Nakayama and others (1995)
<i>Sechium edule</i>	testa	Albone and others (1984)
<i>Solanum tuberosum</i>	immature berries	Jones and others (1988)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Triticum aestivum</i>	developing grain	Gaskin and others (1980)

Zea mays

shoots

Fujioka and others (1988b)

GA16Mis-identified for **GA₅₄** in immature ears of *Secale cereale* (Dathe and others 1978,1989)**GA17**

Abelmoschus esculentus
Agrostemma githago
Arabidopsis thaliana

immature seed
 shoots and leaves
 shoots

Koshioka and others (1996)
 Jones, Zeevaart (1980)
 Talon and others (1990b)

Brassica napus

shoots
 immature siliques

Hedden and others (1989)
 Zanewich, Rood (1993)

Calonyction aculeatum
Cibotium glaucum
Citrus reticulata
Citrus sinensis

immature seeds
 sporophytes
 developing fruit
 immature fruit
 shoots

Murofushi and others (1973)
 Yamane and others (1988a)
 Talon and others (1992)
 Poling (1991)
 Poling, Maier (1988)

Citrus unshiu
Cucurbita maxima

developing fruit
 embryo

Talon and others (1992)
 Lange and others (1993b)

Fragaria x ananassa Duch.

leaves (short day)
 leaves (day neutral)
 immature fruit (day neutral)

Taylor and others (1994)
 Taylor and others (2000a)
 Blake and others (2000b)

Hordeum vulgare

germinating grain
 developing grain

Gaskin and others (1984)
 Gaskin and others (1984)
 Boothe and others (1991)

Ipomoea reptans

immature seeds

Matsuo and others (1984)

Juglans regia

pollinated ovaries
 unpollinated ovaries

Tadeo and others (1994)
 Tadeo and others (1994)

Lactuca sativa
Leucaena leucocephala
Lolium perenne
Lupinus albus
Lycopersicon esculentum

seeds
 immature seed
 leaf tissue
 seeds
 seeds, pericarp
 pollinated fruit
 parthenocarpic fruit

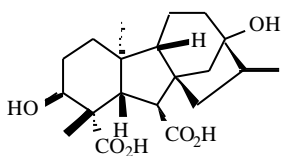
Toyomasu and others (1993)
 Arigayo and others (1983)
 Morvan-Bertrand and others (2001)
 Gaskin and others (1992)
 Bohner and others (1988)
 Koshioka and others (1994)
 Koshioka and others (1994)

Malus domestica

immature seeds

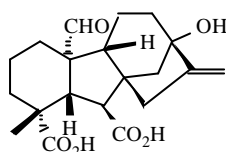
Lin et al. (1991)
 Hedden and others (1993)

	developing seeds xylem exudate	Oyama and others (1996a) Motosugi and others (1996)
<i>Oryza sativa</i>	spikelets	Kobayashi and others (1988)
<i>Pennisetum glaucum</i>	shoots	Devi and others (1994)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Phaseolus coccineus</i>	immature seeds embryo and testa	Durley and others (1971) Albone and others (1984)
<i>Phaseolus vulgaris</i>	immature seeds	Yamane and others (1977)
<i>Pisum sativum</i>	immature seeds	Frydman and others (1974) Gaskin and others (1985)
	dark-grown shoots	Gaskin and others (1985)
	pods, ovules	Garcia-Martinez and others (1991)
	pollinated ovaries	Santes and others (1995)
<i>Pithecellobium microcarpum</i>	immature seeds	Koshioka and others (1986)
<i>Prunus cerasus</i>	immature seeds	Nakayama and others (1996)
<i>Prunus persica</i>	immature seeds	Nakayama and others (2001)
<i>Pyrus communis</i>	seeds	Martin and others (1977)
<i>Quamoclit pennata</i>	immature seeds	Matsuo and others (1984)
<i>Raphanus sativus</i>	leaves, stems mature seeds	Nakayama and others (1995) Nakayama and others (1990)
<i>Sechium edule</i>	endosperm, embryo	Albone and others (1984)
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Spinacia oleracea</i>	shoots	Metzger, Zeevaart (1980a)
<i>Triticum aestivum</i>	developing grain mature grain expanding internode young ear	Gaskin and others (1980) Lenton and others (1994) Webb and others (1998) Webb and others (1998)
<i>Vicia faba</i>	immature seeds	Sponsel and others (1979)
<i>Vitis vinifera</i>	seedless berries seeds, seeded berries	Perez and others (2000) Perez and others (2000)
<i>Zea mays</i>	young tassels shoots immature seeds callus ex embryo	Heupel and others (1985) Fujioka and others (1988a,b) Murofushi and others (1991) Talo and others (1995)

GA18

<i>Lupinus albus</i>	seeds	Gaskin and others (1992)
<i>Lupinus luteus</i>	immature seeds	Koshimizu and others (1968)

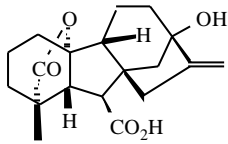
<i>Malus domestica</i>	xylem exudate	Motosugi and others (1996)
<i>Wisteria floribunda</i>	immature seeds	Koshimizu and others (1972)

GA₁₉

<i>Agrostemma githago</i>	shoots and leaves	Jones, Zeevaart (1980)
<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Anemia phyllitidis</i>	sporophytes	Oyama and others (1996b)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Aralia cordata</i>	basal buds	Nishijima and others (1993)
<i>Begonia x cheimantha</i>	leaves	Oden, Heide (1988)
<i>Betula pendula</i>	vegetative buds	Zanewich, Rood (1994)
<i>Brassica napus</i>	stems	Rood and others (1987)
	shoots	Hedden and others (1989)
	immature siliques	Zanewich, Rood (1993)
<i>Calonyction aculeatum</i>	immature seeds	Murofushi and others (1973)
<i>Camellia sinensis</i>	endosperm	Koshioka and others (1993)
<i>Campanula isophylla</i>	leaves and stems	Jensen and others (1996)
<i>Carthamus tinctorius</i>	stems	Potter and others (1993)
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus sinensis</i>	shoots	Poling, Maier (1988)
		Talon and others (1990a)
	immature fruit	Poling (1991)
	seeds	Turnbull (1989)
<i>Citrus unshiu</i>	young fruit	Goto and others (1989)
	developing fruit	Talon and others (1992)
<i>Dendranthema grandiflorum</i>	stem tips	Nishijima and others (1997)
<i>Dioscorea opposita</i>	dormant bulbils	Tanno and others (1992)
<i>Eriobotrya japonica</i>	immature seeds	Koshioka and others (1988)
<i>Eucalyptus globulus</i>	cambial region	Hasan and others (1994)
		Ridoutt and others (1995)
<i>Eucalyptus nitens</i>	apical buds	Hasan and others (1994)
<i>Eustoma grandiflorum</i>	shoots + floral buds	Hisamatsu and others (1998b)
<i>Fragaria x ananassa</i> Duch.	leaves (short day)	Taylor and others (1994)
	leaves (day neutral)	Taylor and others (2000a)
	immature fruit (day neutral)	Blake and others (2000b)
<i>Gentiana triflora</i>	stems and leaves	Koshioka and others (1998)
<i>Helianthus annuus</i>	immature seeds	Hutchison and others (1988)

<i>Hordeum vulgare</i>	germinating grain leaf sheaths	Gaskin and others (1984) Croker and others (1990)
<i>Humulus lupulus</i>	shoots	Watanabe and others (1978)
<i>Ipomoea batatas</i>	immature and mature seeds	Matsuo and others (1984)
<i>Ipomoea pes-caprae</i>	seeds	Matsuo and others (1984)
<i>Ipomoea reptans</i>	seeds	Matsuo and others (1984)
<i>Juglans regia</i>	pollinated ovaries unpollinated ovaries	Tadeo and others (1994) Tadeo and others (1994)
<i>Lactuca sativa</i>	shoots seedlings mature seeds	Waycott and others (1991) Toyomasu and others (1992) Toyomasu and others (1993)
<i>Lathyrus odoratus</i>	shoots	Ross and others (1992)
<i>Leucaena leucocephala</i>	immature seed	Arigayo and others (1983)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lupinus luteus</i>	immature fruits	Fukui and others (1972)
<i>Lycopersicon esculentum</i>	seeds, pericarp pollinated fruit parthenocarpic fruit leaves + shoot tips unpollinated ovaries	Bohner and others (1988) Koshioka and others (1994) Koshioka and others (1994) Grunzweig and others (1997) Fos and others (2000)
<i>Malus domestica</i>	leaves and buds immature seeds developing seeds xylem exudate	Koshioka and others (1985) Lin and others (1991) Hedden and others (1993) Oyama and others (1996a) Motosugi and others (1996)
<i>Mangifera indica</i>	leaves	Davenport and others (2001)
<i>Matthiola incana</i>	shoots + flower buds	Hisamatsu and others (1998a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Orobancha minor</i>	erial parts	Suzuki and others (1994)
<i>Oryza sativa</i>	roots, shoots, ears immature seeds, ears spikelets	Kurogochi and others (1979) Kobayashi and others (1984) Kobayashi and others (1988)
<i>Pennisetum glaucum</i>	shoots	Devi and others (1994)
<i>Phaseolus coccineus</i>	immature seeds embryo and testa	Durley and others (1971) Albone and others (1984)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Phaseolus lunatus</i>	stems, root nodules	Dobert and others (1992a)
<i>Phyllostachys bambusoides</i>	shoots	Yanagisawa and others (1992)
<i>Phyllostachys edulis</i>	shoots	Murofushi and others (1966)
<i>Pisum sativum</i>	immature seeds pods, ovules pollinated ovaries shoots	Gaskin and others (1985) Garcia-Martinez and others (1991) Santes and others (1995) Davies and others (1982)
<i>Polianthes tuberosa</i>	corms	Chang and others (2001)

<i>Populus tremuloides</i>	vegetative buds	Zanewich, Rood (1994)
<i>Prunus avium</i>	fruitlets	Blake, Browning (1994)
	germinating seeds	Blake and others (2000a)
	apices ex 10-wk seedlings	Blake and others (2000a)
	apices ex mature plants	Blake and others (2000a)
<i>Prunus cerasus</i>	immature seeds	Nakayama and others (1996)
<i>Prunus persica</i>	immature seeds	Nakayama and others (2001)
<i>Prunus spachiana</i>	shoots	Kobayashi and others (1996)
<i>Raphanus sativus</i>	leaves, stem	Nakayama and others (1995)
	mature seed	Nakayama and others (1990)
<i>Rumex acetosa</i>	shoots	Rijinders and others (1997)
<i>Rumex palustris</i>	shoots	Rijinders and others (1997)
<i>Saccharum</i> spp	leaves, shoot apical meristem	Kuhnle and others (1983)
<i>Salix pentandra</i>	shoots, catkins	Davies and others (1985)
	roots	Olsen and others (1994)
<i>Sasa kurilensis</i>	shoots	Yanagisawa and others (1992)
<i>Secale cereale</i>	immature ears	Dathe and others (1989)
<i>Secium edule</i>	testa	Albone and others (1984)
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Spinacia oleracea</i>	shoots	Metzger, Zeevaart (1980a)
		Talon and others (1991)
	roots	Metzger, Zeevaart (1980b)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Trifolium repens</i>	arial parts	Suzuki and others (1994)
<i>Triticum aestivum</i>	developing grain	Gaskin and others (1980)
	shoots	Appleford, Lenton (1991)
	mature grain	Lenton and others (1994)
	expanding internode	Webb and others (1998)
	young ear	Webb and others (1998)
<i>Vicia faba</i>	immature seeds	Sponsel and others (1979)
<i>Vigna unguiculata / sinensis</i>	stems, root nodules	Dobert and others (1992b)
<i>Vitis vinifera</i>	seedless berries	Perez and others (2000)
	seeds, seeded berries	Perez and others (2000)
<i>Zea mays</i>	young tassels	Heupel and others (1985)
	shoots	Fujioka and others (1988a,b)
	immature seeds	Murofushi and others (1991)
	callus ex embryo	Talo and others (1995)

GA₂₀

<i>Abelmoschus esculentus</i>	immature seed	Koshioka and others (1996)
<i>Agrostemma githago</i>	shoots and leaves	Jones, Zeevaart (1980)
<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
<i>Alnus tenuifolia</i>	vegetative buds	Zanewich, Rood (1994)
<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Anemia phyllitidis</i>	sporophytes	Oyama and others (1996b)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Aralia cordata</i>	basal buds	Nishijima and others (1993)
<i>Begonia x cheimanthus</i>	leaves	Oden, Heide (1988)
<i>Betula pendula</i>	vegetative buds	Zanewich, Rood (1994)
<i>Brassica napus</i>	stems	Rood and others (1987)
	shoots	Hedden and others (1989)
	immature siliques	Zanewich, Rood (1993)
<i>Bryophyllum</i>		
<i>daigremontianum</i>	shoot tips and upper leaves	Gaskin and others (1973)
<i>Camellia sinensis</i>	endosperm	Koshioka and others (1993)
	leaves, xylem sap	Oyama and others (1999)
<i>Carthamus tinctorius</i>	stems	Potter and others (1993)
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus sinensis</i>	shoots	Poling, Maier (1988)
	reproductive buds, ovaries,	
	shoots, developing fruit	Talon and others (1990a)
	immature fruit	Poling (1991)
	seeds, leaves	Turnbull (1989)
<i>Citrus unshiu</i>	young fruit	Goto and others (1989)
<i>Cucumis melo</i>	mature seeds	Edelstein and others (1995)
	developing fruit	Talon and others (1992)
<i>Dalbergia dolichopetala</i>	germinating seed	Moritz, Montiero (1994)
<i>Dendranthema grandiflorum</i>	stem tips	Nishijima and others (1997)
<i>Dioscorea opposita</i>	dormant bulbils	Tanno and others (1992)
<i>Eriobotrya japonica</i>	immature seeds	Koshioka and others (1988)
<i>Eucalyptus globulus</i>	cambial region	Hasan and others (1994)
		Ridoutt and others (1995)
<i>Eustoma grandiflorum</i>	shoots + floral buds	Hisamatsu and others (1998b)
<i>Fragaria x ananassa</i> Duch.	leaves (short day)	Taylor and others (1994)
	leaves (day neutral)	Taylor and others (2000a)
	immature fruit (day neutral)	Blake and others (2000b)
<i>Gentiana triflora</i>	stems and leaves	Koshioka and others (1998)
<i>Helianthus annuus</i>	seeds	Hutchison and others (1988)

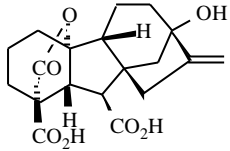
<i>Hordeum vulgare</i>	germinating grain	Gaskin and others (1984)
	leaf sheaths	Boother and others (1991)
	seedlings	Crocker and others (1990)
		Boother and others (1991)
<i>Ipomoea batatas</i>	immature and mature seeds	Matsuo and others (1984)
<i>Ipomoea reptans</i>	seeds	Matsuo and others (1984)
<i>Juglans regia</i>	pollinated ovaries	Tadeo and others (1994)
	unpollinated ovaries	Tadeo and others (1994)
<i>Lactuca sativa</i>	shoots	Waycott and others (1991)
	seedlings	Toyomasu and others (1992)
	mature seeds	Toyomasu and others (1993)
<i>Lathyrus odoratus</i>	shoots	Ross and others (1990)
<i>Leucaena leucocephala</i>	immature seed	Arigayo and others (1983)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lycopersicon esculentum</i>	seeds, pericarp	Bohner and others (1988)
	pollinated fruit	Koshioka and others (1994)
	parthenocarpic fruit	Koshioka and others (1994)
	leaves + shoot tips	Grunzweig and others (1997)
	unpollinated ovaries	Fos and others (2000)
<i>Lygodium circinnatum</i> (as Me ester)	prothallia	Yamauchi and others (1996)
<i>Malus domestica</i>	leaves and buds	Koshioka and others (1985)
	immature seeds	Lin and others (1991)
		Hedden and others (1993)
	developing seeds	Oyama and others (1996a)
<i>Mangifera indica</i>	leaves	Davenport and others (2001)
<i>Matthiola incana</i>	shoots + flower buds	Hisamatsu and others (1998a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Orobanche minor</i>	erial parts	Suzuki and others (1994)
<i>Oryza sativa</i>	immature seeds, ears	Kobayashi and others (1984)
	spikelets	Kobayashi and others (1988)
<i>Pennisetum glaucum</i>	shoots	Devi and others (1994)
<i>Pharbitis nil</i>	immature seeds	Murofushi and others (1968)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Phaseolus coccineus</i>	immature seeds	Durley and others (1971)
	light-grown seedlings	Bowen and others (1973)
	embryo and testa	Albone and others (1984)
<i>Phaseolus lunatus</i>	stems, root nodules	Dobert and others (1992a)
<i>Phaseolus vulgaris</i>	immature seeds	Yamane and others (1977)
<i>Phyllostachys bambusoides</i>	shoots	Yanagisawa and others (1992)
<i>Phyllostachys edulis</i>	shoots	Yanagisawa and others (1992)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Pinus sylvestris</i>	stems	Wang and others (1996)

<i>Pisum sativum</i>	immature seeds	Euwens and others (1973) Frydman, MacMillan (1973)
	cotyledons, embryonic axes and testa	Sponsel (1983)
	shoot apices	Ingram and others (1983)
	dark-grown seedlings	Gaskin and others (1985)
	Pods, seeds, parthenocarpic ovaries	Garcia-Martinez and others (1987a) Garcia-Martinez and others (1987a) Santes and others (1995)
	pollinated ovaries	Garcia-Martinez and others (1991)
	Pods, ovules	Garcia-Martinez and others (1991)
<i>Pithecellobium microcarpum</i>	immature seeds	Koshioka and others (1986)
<i>Polianthes tuberosa</i>	corms	Chang and others (2001)
<i>Populus tremuloides</i>	vegetative buds	Zanewich, Rood (1994)
<i>Prunus avium</i>	fruitlets	Blake, Browning (1994)
	germinating seeds	Blake and others (2000a)
	apices ex 10-wk old plants	Blake and others (2000a)
	apices ex mature plants	Blake and others (2000a)
<i>Prunus cerasus</i>	immature seeds	Nakayama and others (1996)
<i>Prunus spachiana</i>	shoots	Kobayashi and others (1996)
<i>Raphanus sativus</i>	leaves, stems	Nakayama and others (1995)
	mature seeds	Nakayama and others (1990)
<i>Rumex acetosa</i>	shoots	Rijinders and others (1997)
<i>Rumex palustris</i>	shoots	Rijinders and others (1997)
<i>Saccharum spp</i>	leaves, shoot apical meristem	Kuhnle and others (1983)
<i>Salix pentandra</i>	shoots	Davies and others (1985)
<i>Sasa kurilensis</i>	shoots	Yanagisawa and others (1992)
<i>Secale cereale</i>	immature ears	Dathe and others (1989)
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Solanum tuberosum</i>	immature berries	Jones and others (1988)
<i>Spinacia oleracea</i>	shoots	Metzger, Zeevaart (1980a) Talon and others (1991)
<i>Stevia rebaudiana</i>	stems + leaves	Alves, Ruddat (1979)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Trifolium repens</i>	erial parts	Suzuki and others (1994)
<i>Triticum aestivum</i>	developing grain	Gaskin and others (1980)
	shoots	Appleford, Lenton (1991)
	mature grain	Lenton and others (1994)
	expanding internodes	Webb and others (1998)
	young ear	Webb and others (1998)
<i>Vicia faba</i>	immature seeds	Sponsel and others (1979)
<i>Vigna unguiculata / sinensis</i>	leaves, petioles and epicotyls	Garcia-Martinez and others (1987b)
	stems, root nodules	Dobert and others (1992b)
	hypocotyls	Okamoto and others (1995)

Zea mays

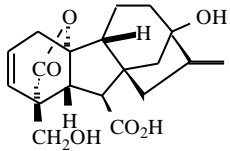
young tassels
shoots
pollen
immature seeds
callus ex embryo

Heupel and others (1985)
Fujioka and others (1988a,b)
Yamaguchi and others (1990)
Murofushi and others (1991)
Talo and others (1995)

GA21*Canavalia gladiata*

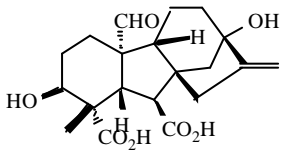
immature seeds

Murofushi and others (1969a,b)

GA22*Canavalia gladiata*

immature seeds

Murofushi and others (1969a,b)

GA23*Ipomoea batatas*

immature and mature seeds

Matsuo and others (1984)

Leucaena leucocephala

immature seed

Arigayo and others (1983)

Lupinus albus

seeds

Gaskin and others (1992)

Lupinus luteus

immature fruits

Fukui and others (1972)

Malus domestica

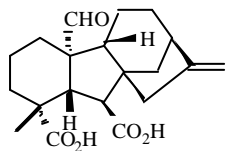
xylem exudate

Motosugi and others (1996)

Wisteria floribunda

immature seeds

Koshimizu and others (1972)

GA24*Allium cepa*

leaf sheaths

Nojiri and others (1993)

Alstroemeria hybrida

leaves

Kappers and others (1997)

Anemia phyllitidis

sporophytes and prothallia

Oyama and others (1996b)

Arabidopsis thaliana

shoots

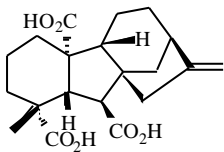
Talon and others (1990b)

Brassica napus

shoots
immature siliques

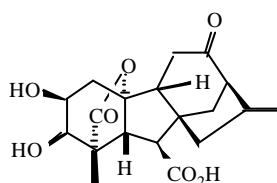
Hedden and others (1989)
Zanewich, Rood (1993)

<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus unshiu</i>	young fruit	Goto and others (1989)
	developing fruit	Talon and others (1992)
<i>Cucumis sativus</i>	40 and 61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
<i>Dioscorea opposita</i>	dormant bulbils	Tanno and others (1992)
<i>Eriobotrya japonica</i>	immature seeds	Yuda and others (1992)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lilium longiflorum</i>	pollen	Abe and others (1991)
<i>Lycopersicon esculentum</i>	seeds	Bohner and others (1988)
	pollinated fruit	Koshioka and others (1994)
<i>Malus domestica</i>	immature seeds	Lin and others (1991)
<i>Marah macrocarpus</i>	endosperm	Beeley and others (1975)
<i>Matthiola incana</i>	shoots + flower buds	Hisamatsu and others (1998a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Orobanche minor</i>	erial parts	Suzuki and others (1994)
<i>Oryza sativa</i>	ears	Kobayashi and others (1984)
<i>Raphanus sativus</i>	leaves, stems	Nakayama and others (1995)
	mature seeds	Nakayama and others (1990)
<i>Secale cereale</i>	immature ears	Dathe and others (1989)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Triticum aestivum</i>	developing grain	Gaskin and others (1980)
<i>Zea mays</i>	shoots	Fujioka and others (1988b)

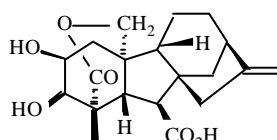
GA25

<i>Anemia phyllitidis</i>	prothallia	Oyama and others (1996b)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Citrus unshiu</i>	young fruit	Goto and others (1989)
<i>Cucumis sativus</i>	40 and 61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Cucurbita maxima</i>	embryo	Blechs Schmidt and others (1984)
	endosperm	Lange and others (1993a)
<i>Dicksonia antarctica</i>	sporophytes	Yamane and others (1988a)
<i>Hordeum vulgare</i>	developing grain	Gaskin and others (1984)

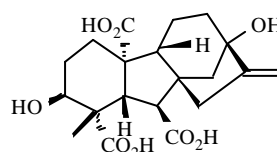
<i>Lycopersicon esculentum</i>	seeds pollinated fruit	Bohner and others (1988) Koshioka and others (1994)
<i>Malus domestica</i>	immature seeds developing seeds	Hedden and others (1993) Oyama and others (1996a)
<i>Marah macrocarpus</i>	endosperm embryos	Beeley and others (1975) MacMillan, Gaskin (1996)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Prunus cerasus</i> <i>Pyrus communis</i>	immature seeds seeds	Nakayama and others (1996) Martin and others (1977)
<i>Raphanus sativus</i>	leaves, stems mature seeds	Nakayama and others (1995) Nakayama and others (1990)
<i>Sechium edule</i>	endosperm, embryo, testa	Albone and others (1984)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)

GA26

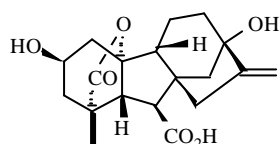
<i>Pharbitis nil</i>	immature seeds	Yokota and others (1971)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)

GA27

<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Calonyction aculeatum</i>	immature seeds	Murofushi and others (1973)
<i>Pharbitis nil</i> <i>Pharbitis purpurea</i>	immature seeds immature seeds	Yokota and others (1971) Fujisawa and others (1985)
<i>Sechium edule</i>	testa	Albone and others (1984)

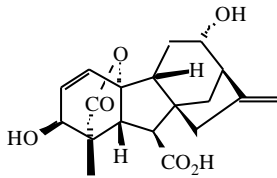
GA28

<i>Cucurbita maxima</i>	endosperm embryo	Lange and others (1993a) Lange and others (1993b)
<i>Dalbergia dolichopetala</i>	germinating seed	Moritz, Montiero (1994)
<i>Lupinus luteus</i>	immature fruits	Fukui and others (1971)

GA₂₉

<i>Abelmoschus esculentus</i>	immature seed	Koshioka and others (1996)
<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Betula pendula</i>	vegetative buds	Zanewich, Rood (1994)
<i>Brassica napus</i>	shoots	Hedden and others (1989)
	immature siliques	Zanewich, Rood (1993)
<i>Calonyction aculeatum</i>	immature seed	Murofushi and others (1973)
<i>Carthamus tinctorius</i>	stems	Potter and others (1993)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus sinensis</i>	shoots	Poling, Maier (1988)
	buds, shoots, fruit	Talon and others (1990a)
	immature fruit	Poling (1991)
	seeds, leaves	Turnbull (1989)
<i>Citrus unshiu</i>	developing fruit	Talon and others (1992)
<i>Eriobotrya japonica</i>	immature seeds	Koshioka and others (1988)
<i>Eucalyptus globulus</i>	cambial tissue	Hasan and others (1994)
		Ridoutt and others (1995)
<i>Fragaria x ananassa</i> Duch.	leaves (short day)	Taylor and others (1994)
	leaves (day neutral)	Taylor and others (2000a)
	immature fruit (day neutral)	Blake and others (2000b)
<i>Hordeum vulgare</i>	leaf sheaths	Crocker and others (1990)
	seedlings	Boother and others (1991)
<i>Juglans regia</i>	pollinated ovaries	Tadeo and others (1994)
	unpollinated ovaries	Tadeo and others (1994)
<i>Lactuca sativa</i>	shoots	Waycott and others (1991)
<i>Lathyrus odoratus</i>	shoots	Ross and others (1990)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lycopersicon esculentum</i>	seeds, pericarp	Bohner and others (1988)
	pollinated and	
	parthenocarpic fruit	Koshioka and others (1994)
	leaves + shoot tips	Grunzweig and others (1997)
	unpollinated ovaries	Fos and others (2000)
<i>Mangifera indica</i>	leaves	Davenport and others (2001)
<i>Oryza sativa</i>	immature seeds, ears	Kobayashi and others (1984)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Phaseolus coccineus</i>	testa	Albone and others (1984)

<i>Phaseolus lunatus</i>	root nodules	Dobert and others (1992a)
<i>Phaseolus vulgaris</i>	immature seeds	Yamane and others (1977)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Pisum sativum</i>	immature seeds	Frydman, MacMillan (1973)
	cotyledons, embryonic axis and testa	Sponsel (1983)
	shoot apices	Ingram and others (1983))
	dark-grown seedlings	Gaskin and others (1985)
	Pods, seeds	Garcia-Martinez and others (1987a)
	parthenocarpic ovaries	Garcia-Martinez and others (1987a)
	pollinated ovaries	Garcia-Martinez and others (1987a)
		Santes and others (1995)
	Pods, ovules	Garcia-Martinez and others (1991)
<i>Prunus armeniaca</i>	immature seeds	Bottini and others (1985)
<i>Prunus avium</i>	fruitlets	Blake, Browning (1994)
	apices ex 10-wk seedlings	Blake and others (2000a)
	apices ex mature plants	Blake and others (2000a)
<i>Prunus domestica</i>	pericarp	Reed, Martin (1976)
<i>Prunus spachiana</i>	shoots	Kobayashi and others (1996)
<i>Raphanus sativus</i>	leaves, stem	Nakayama and others (1995)
<i>Saccharum</i> spp	leaves, shoot, apical meristem	Kuhnle and others (1983)
<i>Salix pentandra</i>	shoots	Davies and others (1985)
	roots	Olsen and others (1994)
<i>Secium edule</i>	embryo and testa	Albone and others (1984)
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Spinacia oleracea</i>	shoots	Metzger, Zeevaart (1980a)
		Talon and others (1991)
	roots	Metzger, Zeevaart (1980b)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Triticum aestivum</i>	shoots	Appleford, Lenton (1991)
	mature grain	Lenton and others (1994)
	expanding internodes	Webb and others (1998)
	young ear	Webb and others (1998)
<i>Vicia faba</i>	immature seeds	Sponsel and others (1979)
<i>Vigna unguiculata / sinensis</i>	stems, root nodules	Dobert and others (1992b)
<i>Zea mays</i>	young tassels	Heupel and others (1985)
	shoots	Fujioka and others (1988a,b)
	immature seeds	Murofushi and others (1991)
	callus ex embryo	Talo and others (1995)

GA30

Calonyction aculeatum

immature seeds

Murofushi and others (1973)

Prunus cerasus

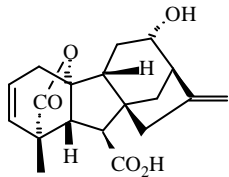
immature seeds

Nakayama and others (1996)

Prunus persica

immature seeds

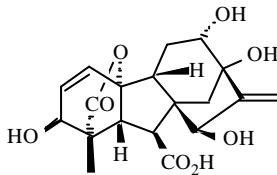
Nakayama and others (2001)

GA31

Calonyction aculeatum

immature seeds

Murofushi and others (1973)

GA32

Prunus armeniaca

immature seeds

Coombe (1971)

Yamaguchi and others (1975a,b)

Bottini and others (1985)

Blake, Browning (1994)

Blake and others (2000a)

Blake and others (2000a)

Blake and others (2000a)

Prunus avium

fruitlets

mature seeds

germinating seeds

apices ex 10-wk seedlings

Prunus cerasus

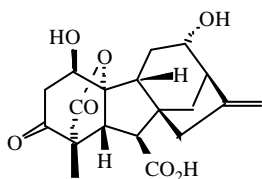
immature seeds

Nakayama and others (1996)

Prunus persica

seeds

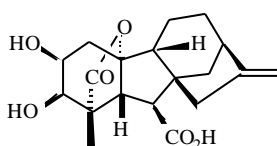
Yamaguchi and others (1975a,b)

GA33

Calonyction aculeatum

immature seeds

Murofushi and others (1973)

GA34

Abelmoschus esculentus

immature seed

Koshioka and others (1996)

Allium cepa

leaf sheaths

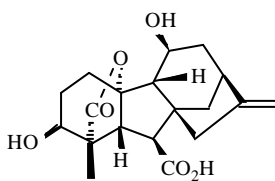
Nojiri and others (1993)

Arabidopsis thaliana

shoots

Talon and others (1990b)

<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
<i>Brassica napus</i>	shoots immature siliques	Hedden and others (1989) Zanewich, Rood (1993)
<i>Calonyction aculeatum</i>	immature seeds	Murofushi and others (1973)
<i>Cucumis melo</i>	mature seeds	Edelstein and others (1995)
<i>Cucumis sativus</i>	40 and 61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Hordeum vulgare</i>	developing grain germinating grain	Gaskin and others (1984) Boother and others (1991) Gaskin and others (1984)
<i>Leucaena leucocephala</i>	immature seed	Arigayo and others (1983)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lycopersicon esculentum</i>	leaves + shoot tips unpollinated ovaries	Grunzweig and others (1997) Fos and others (2000)
<i>Malus domestica</i>	immature seeds	Lin and others (1991) Hedden and others (1993)
<i>Matthiola incana</i>	developing seeds shoots + flower buds	Oyama and others (1996a) Hisamatsu and others (1998a)
<i>Oryza sativa</i>	immature seeds, ears spikelets	Kobayashi and others (1984) Kobayashi and others (1988)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Raphanus sativus</i>	leaves, stem	Nakayama and others (1995)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Triticum aestivum</i>	shoots expanding internode	Appleford, Lenton (1991) Webb and others (1998)
<i>Zea mays</i>	immature seeds shoots	Murofushi and others (1991) Fujioka and others (1988b)

GA₃₅

<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
<i>Cytisus scoparius</i>	immature seeds	Yamane and others (1971,1974)
<i>Eriobotrya japonica</i>	immature seeds immature seeds	Koshioka and others (1988) Yuda and others (1992)

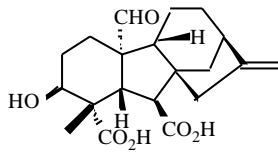
Malus domestica

immature seeds

Lin and others (1991)
Hedden and others (1993)

developing seeds

Oyama and others (1996a)

GA36*Arabidopsis thaliana*

shoots

Talon and others (1990b)

Cucurbita maxima

endosperm

Lange and others (1993a)

Dioscorea opposita

dormant bulbils

Tanno and others (1992)

Psilotum nudum

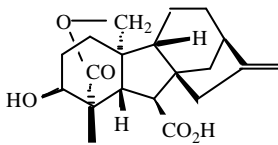
fronds

Takahashi and others (1984)

Saccharum spp

apical meristem

Koshioka and others (1984)

GA37*Arabidopsis thaliana*

shoots

Talon and others (1990b)

Aralia cordata

basal buds

Nishijima and others (1993)

Cibotium glaucum

sporophytes

Yamane and others (1988a)

Cucurbita maxima

embryos

Lange and others (1993b)

Dicksonia antarctica

sporophytes

Yamane and others (1988a)

Marah macrocarpus

endosperm

MacMillan, Gaskin (1996)

Matthiola incana

shoots + flower buds

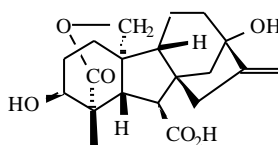
Hisamatsu and others (1998a)

Phaseolus vulgaris

immature seeds

Hiraga and others (1974b)

Yamane and others (1977)

GA38*Camellia sinensis*

endosperm

Koshioka and others (1993)

Cucurbita maxima

embryos

Lange and others (1993b)

Orobancha minor

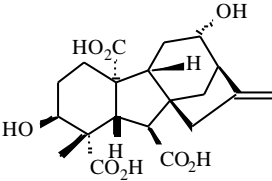
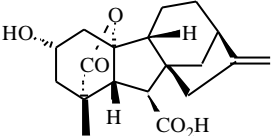
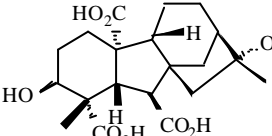
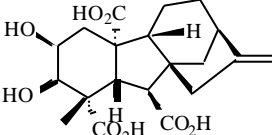
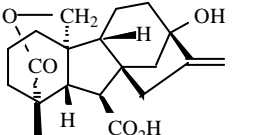
erial parts

Suzuki and others (1994)

Phaseolus coccineus

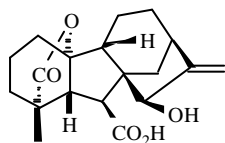
embryo, testa

Albone and others (1984)

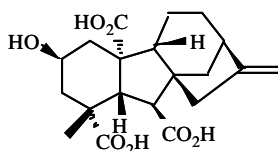
	<i>Phaseolus vulgaris</i>	immature seeds	Hiraga and others (1974b) Yamane and others (1977)
	<i>Secchium edule</i>	endosperm, embryos	Albone and others (1984)
GA39			
	<i>Cucurbita maxima</i> <i>Cucurbita pepo</i>	embryos and mature seed seeds	Blechs Schmidt and others (1984) Fukui and others (1977)
GA40			
	<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
	<i>Raphanus sativus</i>	mature seeds	Nakayama and others (1998)
GA41			
	<i>Arabidopsis thaliana</i> , <i>gai mutant</i>	shoots	Talon and others (1990c)
GA43			
	<i>Cucurbita maxima</i>	endosperm embryos, endosperm	Graebe and others (1974) Blechs Schmidt and others (1984)
	<i>Lupinus albus</i>	seeds	Gaskin and others (1992)
	<i>Marah macrocarpus</i>	endosperm embryos	Beeley and others (1975) MacMillan, Gaskin (1996)
	<i>Pisum sativum</i>	pollinated ovaries	Santes and others (1995)
GA44			
	<i>Abelmoschus esculentus</i>	immature seed	Koshioka and others (1996)
	<i>Agrostemma githago</i>	shoots and leaves	Jones, Zeevaart (1980)
	<i>Allium cepa</i>	leaf sheaths	Nojiri and others (1993)
	<i>Alstroemeria hybrida</i>	leaves	Kappers and others (1997)
	<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)

<i>Aralia cordata</i>	basal buds	Nishijima and others (1993)
<i>Brassica napus</i>	shoots	Hedden and others (1989)
<i>Camellia sinensis</i>	endosperm xylem sap	Koshioka and others (1993) Oyama and others (1999)
<i>Campanula isophylla</i>	leaves and stems	Jensen and others (1996)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus sinensis</i>	shoots	Poling, Maier (1988)
<i>Citrus unshiu</i>	young fruit developing fruit	Goto and others (1989) Talon and others (1992)
<i>Dendranthema grandiflorum</i>	stem tips	Nishijima and others (1997)
<i>Eriobotrya japonica</i>	immature seeds	Koshioka and others (1988)
<i>Eucalyptus globulus</i>	cambial tissue	Ridoutt and others (1995)
<i>Eustoma grandiflorum</i>	shoots + floral buds	Hisamatsu and others (1998b)
<i>Fragaria x ananassa</i> Duch.	leaves (short day) immature fruit (day neutral)	Taylor and others (1994) Blake and others (2000b)
<i>Gentiana triflora</i>	stems and leaves	Koshioka and others (1998)
<i>Juglans regia</i>	pollinated ovaries unpollinated ovaries	Tadeo and others (1994) Tadeo and others (1994)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lycopersicon esculentum</i>	seeds pollinated fruit parthenocarpic fruit leaves, shoot tips unpollinated ovaries	Bohner and others (1988) Koshioka and others (1994) Koshioka and others (1994) Grunzweig and others (1997) Fos and others (2000)
<i>Malus domestica</i>	immature seeds xylem exudate	Lin and others (1991) Hedden and others (1993) Motosugi and others (1996)
<i>Orobanche minor</i>	arial parts	Suzuki and others (1994)
<i>Oryza sativa</i>	immature seeds, ears	Kobayashi and others (1984)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Phaseolus coccineus</i>	embryo and testa suspensor	Albone and others (1984) Picciarelli, Alpi (1986)
<i>Phaseolus lunatus</i>	stems, root nodules	Dobert and others (1992a)
<i>Phaseolus vulgaris</i>	immature seeds	Yamane and others (1977)
<i>Pisum sativum</i>	immature seeds	Frydman and others (1974) Gaskin and others (1985)
<i>Prunus cerasus</i>	immature seeds	Nakayama and others (1996)
<i>Prunus persica</i>	immature seeds	Nakayama and others (2001)
<i>Prunus spachiana</i>	shoots	Kobayashi and others (1996)

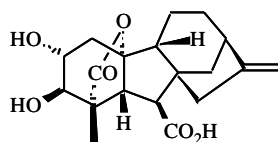
<i>Raphanus sativus</i>	leaves, stems	Nakayama and others (1995)
<i>Secium edule</i>	endosperm, embryo, testa	Albone and others (1984)
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Spinacia oleracea</i>	shoots	Metzger, Zeevaart (1980a)
	roots	Talon and others (1991)
		Metzger, Zeevaart (1980b)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Trifolium repens</i>	arial parts	Suzuki and others (1994)
<i>Triticum aestivum</i>	developing grain	Gaskin and others (1980)
	shoots	Appleford, Lenton (1991)
	expanding internode	Webb and others (1998)
	young ear	Webb and others (1998)
<i>Vicia faba</i>	immature seeds	Sponsel and others (1979)
<i>Vigna unguiculata / sinensis</i>	stems, root nodules	Dobert and others (1992b)
<i>Zea mays</i>	young tassels	Heupel and others (1985)
	shoots	Fujioka and others (1988a,b)
	immature seeds	Murofushi and others (1991)

GA45

<i>Anemia mexicana</i>	gametophytes	Nester-Hudson and others (1998)
<i>Helianthus annuus</i>	almost mature seeds	Hutchison and others (1988)
<i>Malus domestica</i>	immature seeds	Hedden and others (1993)
	developing seeds	Oyama and others (1996a)
<i>Pyrus communis</i>	seeds	Bearder and others (1975)
		Martin and others (1977)
		Dolan, MacMillan (1985)

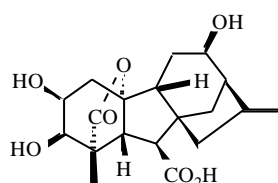
GA46

<i>Marah macrocarpus</i>	endosperm	Beeley, MacMillan. (1976)
	endosperm, embryo	MacMillan, Gaskin (1996)

GA47*Orobanche minor*

arial parts

Suzuki and others (1994)

GA48*Cucurbita maxima*endosperm
embryo

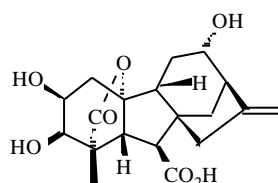
Lange and others (1993a)

Cucurbita pepo

seeds

Lange and others (1993b)
Fukui and others (1977)*Fragaria x ananassa* Duch. immature fruit (day neutral)

Blake and others (2000b)

*Hordeum vulgare*developing grain
germinating grainGaskin and others (1984)
Boother and others (1991)
Gaskin and others (1984)**GA49***Cucurbita maxima*endosperm, embryos
seeds

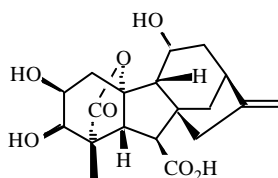
Blechsmidt and others (1984)

Cucurbita pepo

Fukui and others (1977)

Fragaria x ananassa Duch. immature fruit (day neutral)

Blake and others (2000b)

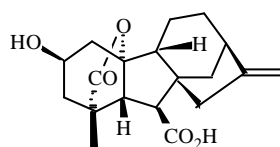
GA50*Eriobotrya japonica*

immature seeds

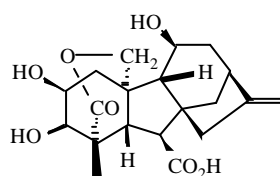
Koshioka and others (1988)
Yuda and others (1992)*Lagenaria leucantha*

seeds

Fukui and others (1978)

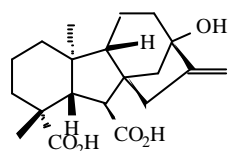
GA51

<i>Allium cepa</i>	leaves	Nojiri and others (1993)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Brassica napus</i>	shoots immature siliques	Hedden and others (1989) Zanewich, Rood (1993)
<i>Camellia sinensis</i>	xylem sap	Oyama and others (1999)
<i>Cucumis sativus</i>	40 and 61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Lilium elegans</i>	bulbs	Takayama and others (1993)
<i>Lycopersicon esculentum</i>	leaves + shoot tips	Grunzweig and others (1997)
<i>Malus domestica</i>	immature seeds	Lin and others (1991)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Oryza sativa</i>	ears	Kobayashi and others (1984)
<i>Picea abies</i>	shoots	Moritz (1995)
<i>Pisum sativum</i>	seeds	Sponsel, MacMillan (1977)
<i>Raphanus sativus</i>	leaves, stem	Nakayama and others (1995)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Vigna unguiculata / sinensis</i>	hypocotyls	Okamoto and others (1995)

GA52

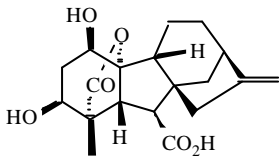
<i>Lagenaria leucantha</i>	seeds	Fukui and others (1978)
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GA53

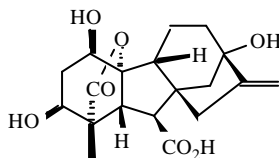


<i>Agrostemma githago</i>	shoots and leaves	Jones, Zeevaart (1980)
<i>Arabidopsis thaliana</i>	shoots	Talon and others (1990b)
<i>Aralia cordata</i>	basal buds	Nishijima and others (1993)
<i>Brassica napus</i>	immature siliques	Zanewich, Rood (1993)
<i>Camellia sinensis</i>	xylem sap	Oyama and others (1999)
<i>Campanula isophylla</i>	leaves and stems	Jensen and others (1996)
<i>Citrus reticulata</i>	developing fruit	Talon and others (1992)
<i>Citrus unshiu</i>	young fruit	Goto and others (1989)
	developing fruit	Talon and others (1992)
<i>Dendranthema grandiflorum</i>	stem tips	Nishijima and others (1997)
<i>Dioscorea opposita</i>	dormant bulbils	Tanno and others (1992)
<i>Eustoma grandiflorum</i>	shoots + floral buds	Hisamatsu and others (1998b)
<i>Fragaria x ananassa</i> Duch.	immature fruit (day neutral)	Blake and others (2000b)
<i>Gentiana triflora</i>	stems and leaves	Koshioka and others (1998)
<i>Juglans regia</i>	pollinated ovaries	Tadeo and others (1994)
	unpollinated ovaries	Tadeo and others (1994)
<i>Lactuca sativa</i>	shoots	Waycott and others (1991)
<i>Leucaena leucocephala</i>	immature seed	Arigayo and others (1983)
<i>Lolium perenne</i>	leaf tissue	Morvan-Bertrand and others (2001)
<i>Lolium temulentum</i>	leaves	Gocal and others (1999)
<i>Lycopersicon esculentum</i>	leaves + shoot tips	Grunzweig and others (1997)
	unpollinated ovaries	Fos and others (2000)
<i>Malus domestica</i>	immature seeds	Lin and others (1991)
	developing seeds	Hedden and others (1993)
	xylem exudate	Oyama and others (1996a)
<i>Mathiola incana</i>	shoots + flower buds	Motosugi and others (1996)
		Hisamatsu and others (1998a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Oryza sativa</i>	immature seeds	Kobayashi and others (1984)
<i>Pennisitum glaucum</i>	shoots	Devi and others (1994)
<i>Pharbitis purpurea</i>	immature seeds	Fujisawa and others (1985)
<i>Polianthes tuberosa</i>	corms	Chang and others (2001)
<i>Rumex acetosa</i>	shoots	Rijinders and others (1997)
<i>Rumex palustris</i>	shoots	Rijinders and others (1997)
<i>Sechium edule</i>	testa	Albone and others (1984)

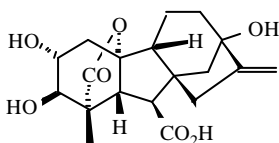
<i>Silene armeria</i>	shoots	Talon, Zeevaart (1990)
<i>Spinacia oleracea</i>	shoots	Talon and others (1991)
<i>Thlaspi arvense</i>	shoots	Metzger, Mardaus (1986)
<i>Triticum aestivum</i>	shoots expanding internode young ear	Appleford, Lenton (1991) Webb and others (1998) Webb and others (1998)
<i>Vicia faba</i>	immature seeds	Sponsel and others (1979)
<i>Zea mays</i>	young tassels shoots immature seeds callus ex embryo	Heupel and others (1985) Fujioka and others (1988a,b) Murofushi and others (1991) Talo and others (1995)

GA54

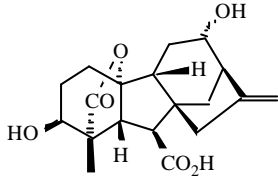
<i>Malus domestica</i>	immature seeds developing seeds	Lin and others (1991) Hedden and others (1993) Oyama and others (1996a)
<i>Secale cereale</i>	immature ears	Dathe and others (1989)
<i>Triticum aestivum</i>	developing grain	Gaskin and others (1980)

GA55

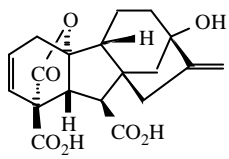
<i>Carica papaya</i>	fruits	Dathe and others (1991)
<i>Secale cereale</i>	immature ears	Dathe and others (1989)
<i>Triticum aestivum</i>	developing grain	Gaskin and others (1980)

GA56

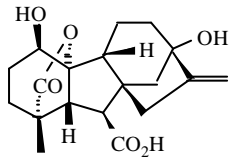
<i>Salix pentandra</i>	roots	Olsen and others (1994)
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GA58

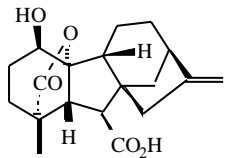
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Cucurbita maxima</i>	endosperm	Beale and others (1984)
<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
<i>Orobanche minor</i>	erial parts	Suzuki and others (1994)

GA59

<i>Canavalia gladiata</i>	immature seeds	Yokota, Takahashi (1981)
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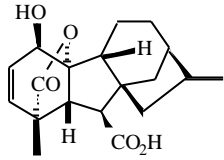
GA60

<i>Pisum sativum</i>	pollinated ovaries	Santes and others (1995)
<i>Secale cereale</i>	immature ears	Dathe and others (1989)
<i>Spinacia oleracea</i>	shoots	Zeevaart and others (1993)
<i>Triticum aestivum</i>	developing grain	Kirkwood, MacMillan (1982)

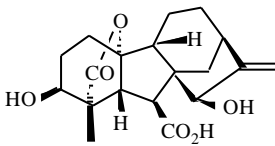
GA61

<i>Anemia mexicana</i>	gametophytes	Nester-Hudson and others (1998)
<i>Eriobotrya japonica</i>	immature seeds	Koshioka and others (1988)
<i>Malus domestica</i>	immature seeds	Kirkwood, MacMillan (1982)
		Lin and others (1991)
		Hedden and others (1993)
	developing seeds	Oyama and others (1996a)

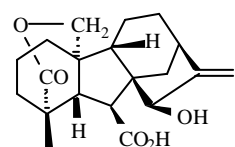
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Pyrus malus</i>	immature seeds	Kirkwood, MacMillan (1982)
<i>Triticum aestivum</i>	developing grain	Kirkwood, MacMillan (1982)

GA62

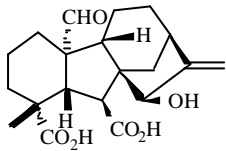
<i>Malus domestica</i>	immature seeds	Lin and others (1991) Hedden and others (1993)
<i>Marah macrocarpus</i>	developing seeds endosperm	Oyama and others (1996a) MacMillan, Gaskin (1996)
<i>Pyrus malus</i>	immature seeds	Kirkwood, MacMillan (1982)
<i>Triticum aestivum</i>	developing grain	Kirkwood, MacMillan (1982)

GA63

<i>Malus domestica</i>	immature seeds	Lin and others (1991) Hedden and others (1993)
	developing seeds	Oyama and others (1996a)
<i>Prunus persica</i>	immature seeds	Nakayama and others (2001)
<i>Pyrus communis</i>	seeds	Dolan and others (1985)

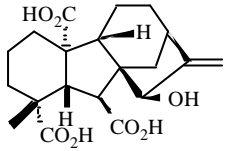
GA64

<i>Helianthus annuus</i>	almost mature seeds	Hutchison and others (1988)
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GA65*Helianthus annuus*

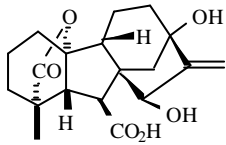
seeds

Hutchison and others (1988)

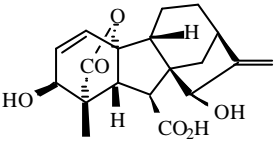
GA66*Helianthus annuus*

seeds

Hutchison and others (1988)

GA67*Helianthus annuus*

seeds

Dolan, MacMillan (1985)
Hutchison and others (1988)**GA68***Malus domestica*

immature seeds

Lin and others (1991)

Prunus persica

immature seeds

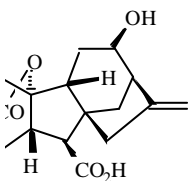
Hedden and others (1993)

Pyrus communis

seeds

Nakayama and others (2001)

Dolan, MacMillan (1985)

GA69*Cibotium glaucum*

sporophytes

Yamane and others (1988a)

Cyathea australis

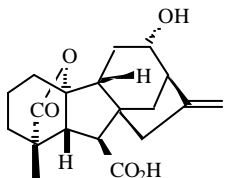
sporophytes

Yamane and others (1985)

Hordeum vulgare

developing grain

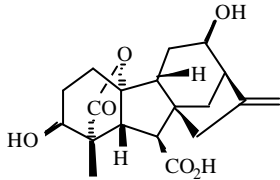
Gaskin and others (1984)

GA70*Abelmoschus esculentus*

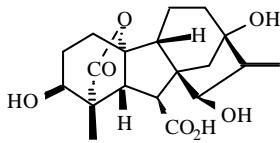
immature seed

Koshioka and others (1996)

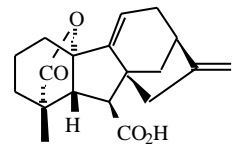
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Cucumis sativus</i>	61 day-old shoots of normal- and bush-types	Nakayama and others (1989)
<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)
<i>Lygodium circinnatum</i> (as Me ester)	prothallia	Yamauchi and others (1996)
<i>Malus domestica</i>	developing seeds	Oyama and others (1996a)

GA71

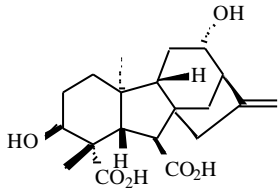
<i>Arabidopsis thaliana</i> , <i>gai mutant</i>	shoots	Talon and others (1990c)
<i>Cibotium glaucum</i>	sporophytes	Yamane and others (1988a)
<i>Cyathea australis</i>	sporophytes	Yamane and others (1985)

GA72

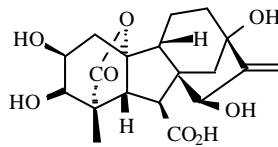
<i>Helianthus annuus</i>	seeds	Hutchison and others (1988)
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GA73

<i>Lygodium circinnatum</i> (as Me ester)	prothallia	Yamauchi and others (1996)
<i>Lygodium flexuosum</i> (as Me ester)	prothallia	Yamauchi and others (1996)
<i>Lygodium japonicum</i> (as Me ester)	prothallia	Yamane and others (1988b)
<i>Malus domestica</i>	developing seeds	Oyama and others (1996a)

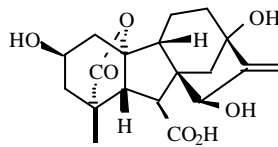
GA74*Cucurbita maxima*

endosperm, embryos

Blechsmidt and others (1984)
Murofushi and others (1988)**GA75***Helianthus annuus*

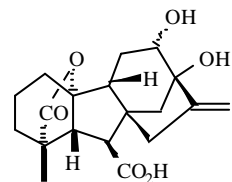
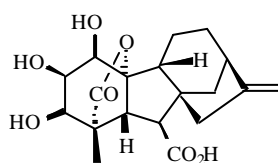
mature seeds

Castellaro and others (1990)

GA76*Helianthus annuus*

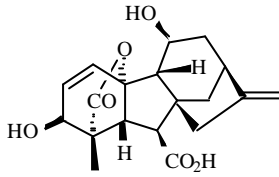
mature seeds

Castellaro and others (1990)

GA77*Fragaria x ananassa* Duch. immature fruit (day neutral) Blake and others (2000b)*Lactuca sativum* mature seeds Toyomasu and others (1993)*Raphanus sativus* mature seed Nakayama and others (1990)**GA79***Triticum aestivum*

mature grain

Penny and others (1993)
Lenton and others (1994)

GA80*Eriobotrya japonica*

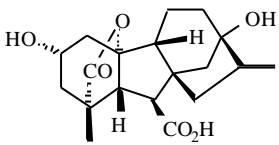
immature seeds

Yuda and others (1992)

Malus domestica

immature seeds

Hedden and others (1993)

GA81*Citrus sinensis*

seeds

Turnbull (1989)

Eucalyptus globulus

cambial region

Ridoutt and others (1995)

Lathyrus odoratus

shoots

Ross and others (1990)

Lycopersicon esculentum

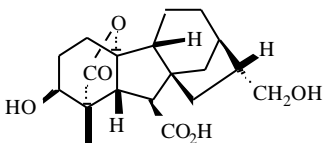
unpollinated ovaries

Fos and others (2000)

*Pisum sativum*dark grown shoots
pods
pollinated ovariesGaskin and others (1985)
Garcia-Martinez and others (1991)
Santes and others (1995)*Spinacia oleracea*

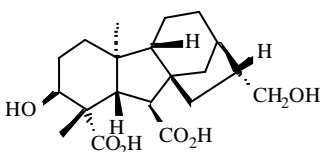
shoots

Zeevaart and others (1993)

GA82*Lupinus albus*

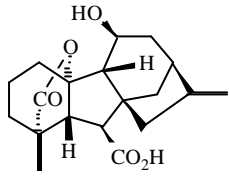
seeds

Gaskin and others (1992)

GA83*Lupinus albus*

seeds

Gaskin and others (1992)

GA84*Eriobotrya japonica*

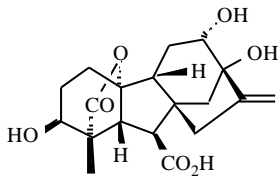
immature seeds

Yuda and others (1992)

Malus domestica

immature seeds

Hedden and others (1993)

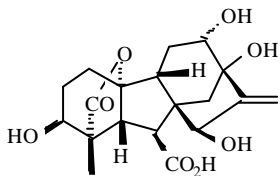
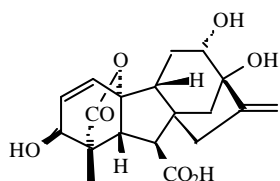
GA85*Brassica campestris*

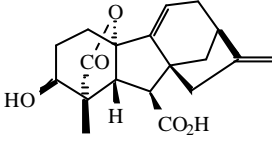
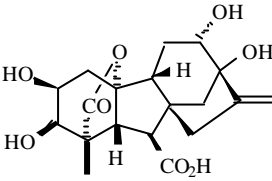
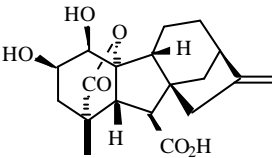
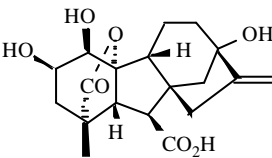
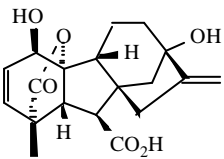
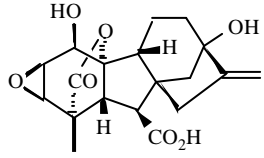
cotyledons

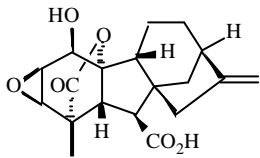
Sheng and others (1992a)
Bhaskar and others (1991)*Cucurbita maxima*

embryos

Lange and others (1993b)

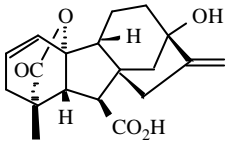
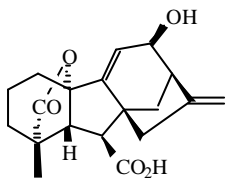
*Prunus avium*fruitlets
mature seeds
germinating seeds
apices ex 10-wk seedlingsBlake, Browning (1994)
Blake and others (2000a)
Blake and others (2000a)
Blake and others (2000a)**GA86***Prunus avium*fruitlets
mature and germinating seeds
apices ex 10-wk seedlingsBlake, Browning (1994)
Blake and others (2000a)
Blake and others (2000a)
Nakayama and others (1996)
Bhaskar and others (1991)*Prunus cerasus**Prunus persica*immature seeds
immature seeds**GA87***Prunus avium*fruitlets
mature seeds
germinating seeds
apices ex 10-wk seedlingsBlake and others (1993)
Blake and others (2000a)
Blake and others (2000a)
Blake and others (2000a)

	<i>Prunus cerasus</i> <i>Prunus persica</i>	immature seeds immature seeds	Nakayama and others (1996) Nakayama and others (2001)
GA88			
	<i>Lygodium circinnatum</i> (as Me ester)	prothallia	Yamauchi and others (1996)
	<i>Malus domestica</i>	immature seeds	Hedden and others (1993)
GA89			
	<i>Brassica campestris</i>	cotyledons	Sheng and others (1992b)
GA90			
	<i>Triticum aestivum</i>	mature grain	Penny and others (1993)
GA91			
	<i>Pisum sativum</i> <i>Triticum aestivum</i>	pollinated ovaries developing grain	Santes and others (1995) Penny and others (1994)
GA92			
	<i>Triticum aestivum</i>	developing grain	Penny and others (1994)
GA93			
	<i>Triticum aestivum</i>	mature grain	Findlow and others (1997)

GA94*Triticum aestivum*

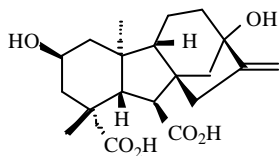
mature grain

Findlow and others (1997)

GA95*Prunus cerasus*
*Prunus persica*immature seeds
immature seedsNakayama and others (1996)
Nakayama and others (2001)**GA96***Lygodium circinnatum*
(as Me ester)

prothallia

Yamauchi and others (1996)

GA97*Campanula isophylla*

leaves and stems

Jensen and others (1996)

Fragaria x ananassa Duch. immature fruit (day neutral)

Blake and others (2000b)

*Hordeum vulgare*floral apices
leaf sheathsMander and others (1996)
Mander and others (1996)*Lolium perenne*

leaf tissue

Morvan-Bertrand and others (2001)

Lycopersicon esculentum
cultured roots
fruitMander and others (1996)
Mander and others (1996)*Pisum sativum*

pods

Mander and others (1996)

Prunus persica

immature seeds

Nakayama and others (2001)

Spinacia oleracea

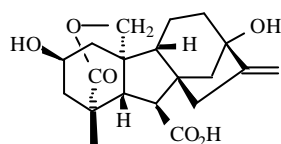
shoots

Mander and others (1996)

Triticum aestivum

young ear

Webb and others (1998)

GA98*Pisum sativum*

immature seeds

Frydman and others (1974)
see Mander and others (1996)Mistakenly identified as **GA38** (Frydman and others, 1974), then withdrawn (Sponsel and others, 1979).*Spinacia oleracea*

shoots

Mander and others (1996)

Triticum aestivum

young ear

Webb and others (1998)

Vicia faba

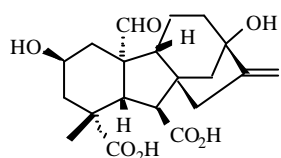
immature seeds

Sponsel and others (1979)

Zea mays

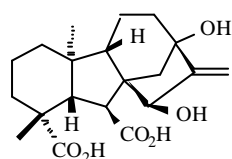
pollen

Mander and others (1996)

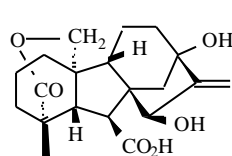
GA99*Spinacia oleracea*

shoots

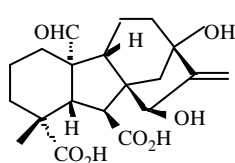
Mander and others (1996)

GA100*Helianthus annuus*

seeds

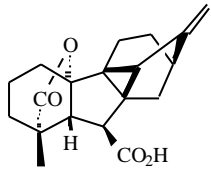
Owen and others (1996)
Hutchison and others (1988)**GA101***Helianthus annuus*

seeds

Owen and others (1996)
Hutchison and others (1988)**GA102***Helianthus annuus*

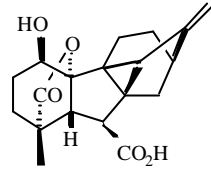
seeds

Owen and others (1996)
Hutchison and others (1988)

GA103*Malus domestica*

seeds

Oyama and others (1996a)

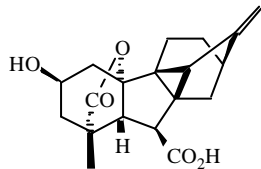
GA104*Anemia mexicana*

gametophytes

Furber, Mander (1988)
Furber and others (1989)*Malus domestica*

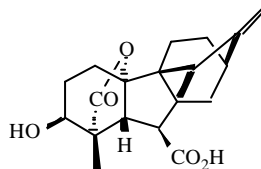
immature seeds

Oyama and others (1996a)

GA105*Malus domestica*

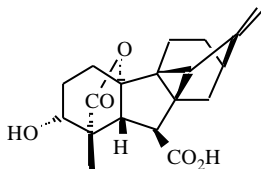
immature seeds

Oyama and others (1996a)

GA106*Malus domestica*

immature seeds

Oyama and others (1996a)

GA107*Anemia phyllitidis*

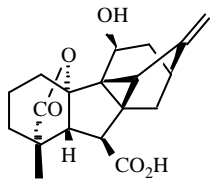
prothallia

Yamauchi and others (1991)

Malus domestica

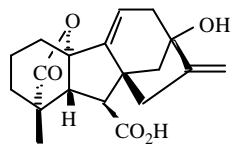
immature seeds

Oyama and others (1996a)

GA108*Malus domestica*

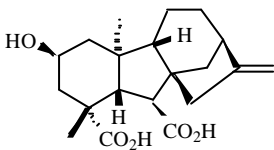
immature seeds

Oyama and others (1996a)

GA109*Lygodium circinnatum*
(as Me ester)

gametophytes

Wynne and others (1998b)

GA110*Elaeis guineensis*

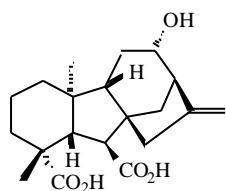
inflorescences

Owen and others (1998)

Spinacia oleacea

leaves

Owen and others (1998)

GA111*Cucurbita maxima*

endosperm, embryo

Blechsmidt and others (1984)

Cybotium glaucum

croziers

Murofushi and others (1988)

Yamane and others (1988a)

Dicksonia antarctica

croziers

Yamane and others (1988a)

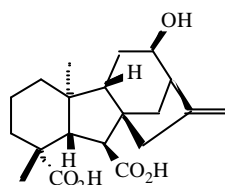
Fragaria x ananassa Duch. immature fruit (day neutral)

Blake and others (2000b)

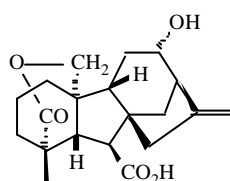
Raphanus sativus

shoots

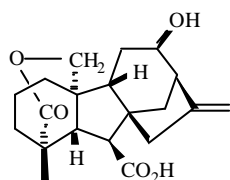
Nakayama and others (1998)

GA112

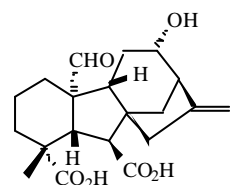
<i>Dicksonia antarctica</i>	croziers	Yamane and others (1988a)
<i>Fragaria x ananassa</i> Duch.	immature fruit (day neutral)	Blake and others (2000b)
<i>Matthiola incana</i>	shoots + flower buds	Hisamatsu and others (1998a)
<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Raphanus sativus</i>	shoots	Nakayama and others (1998)

GA113

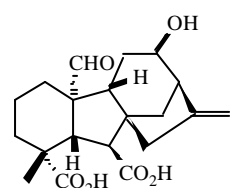
<i>Raphanus sativus</i>	shoots	Nakayama and others (1998)
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GA114

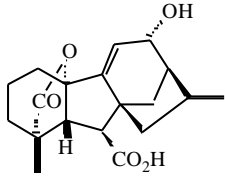
<i>Raphanus sativus</i>	shoots	Nakayama and others (1998)
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GA115

<i>Ornithogalum thyroides</i>	inflorescences	Koshioka and others (1999)
<i>Raphanus sativus</i>	shoots	Nakayama and others (1998)

GA116

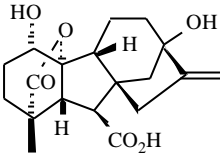
<i>Raphanus sativus</i>	mature seed, shoots	Nakayama and others (1998)
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GA117

Lygodium circinnatum
(as Me ester)

gametophytes

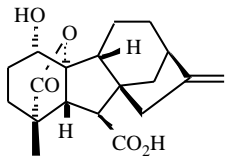
Wynne and others (1998a)

GA118

Prunus persica

immature seeds

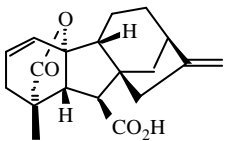
Nakayama and others (2001)

GA119

Prunus persica

immature seeds

Nakayama and others (2001)

GA120

Ornithogalum thyroides

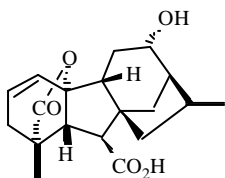
inflorescences

Koshioka and others (1999)

Prunus persica

immature seeds

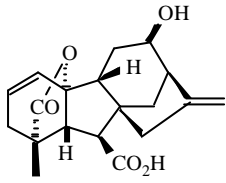
Nakayama and others (2001)

GA121

Prunus persica

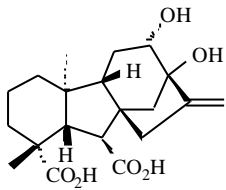
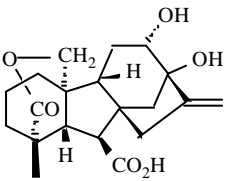
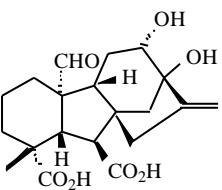
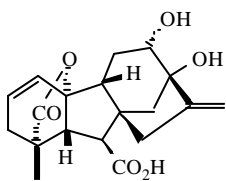
immature seeds

Nakayama and others (2001)

GA122*Prunus persica*

immature seeds

Nakayama and others (2001)

GA123*Fragaria x ananassa* Duch. immature fruit (day neutral) Blake and others (2000b)**GA124***Fragaria x ananassa* Duch. immature fruit (day neutral) Blake and others (2000b)**GA125***Fragaria x ananassa* Duch. immature fruit (day neutral) Blake and others (2000b)**GA126***Prunus persica*

immature seeds

Nakayama and others (2001)

Table 2. Alphabetical listing of Vascular Plants and the Gibberellins Identified in Their Various Tissues

Plant	Tissue	Gibberellin	Reference
<i>Abelmoschus esculentus</i>	immature seed	GA ₁ GA ₃ GA ₄ GA ₈ GA ₁₇ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₇₀	Koshioka and others (1996)
<i>Abies alba</i>	needles	GA ₉	Christmann, Dumas (1998)
<i>Agrostemma githago</i>	shoots and leaves	GA ₁ GA ₁₇ GA ₁₉ GA ₂₀ GA ₄₄ GA ₅₃	Jones, Zeevaart. (1980)
<i>Allium cepa</i>	leaf sheaths	GA ₁ GA ₄ GA ₈ GA ₉ GA ₁₂ GA ₁₅ GA ₂₀ GA ₂₄ GA ₃₄ GA ₄₄ GA ₅₁	Nojiri and others (1993)
<i>Alnus tenuifolia</i>	vegetative buds	GA ₁ GA ₈ GA ₂₀	Zanewich, Rood (1994)
<i>Alstroemeria hybrida</i>	leaves	GA ₁ GA ₄ GA ₈ GA ₉ GA ₁₅ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₉ GA ₃₄ GA ₄₄	Kappers and others (1997)
<i>Althaea rosea</i>	shoot apices	GA ₁ GA ₃ GA ₉	Harada, Nitsch (1967)
<i>Anemia mexicana</i>	gametophytes	GA ₁₀₄	Furber, Mander (1988) Furber and others (1989)
<i>Anemia phyllitidis</i>	gametophytes	GA ₄₅ GA ₆₁	Nester-Hudson and others (1998)
	prothallia	GA ₉ GA ₂₄ GA ₂₅ GA ₁₀₇	Oyama and others (1996b) Yamauchi and others (1991)
	sporophytes	GA ₄ GA ₉ GA ₁₅ GA ₁₉ GA ₂₀ GA ₂₄	Oyama and others (1996b)
<i>Arabidopsis thaliana</i>	seeds	GA ₁ GA ₃ GA ₄ GA ₉	Derkx and others (1994)
	shoots	GA ₁ GA ₄ GA ₈ GA ₉ GA ₁₂ GA ₁₃ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₅ GA ₂₇ GA ₂₉ GA ₃₄ GA ₃₆ GA ₃₇ GA ₄₄ GA ₅₁ GA ₅₃	Talon and others (1990b)
<i>Aralia cordata</i>	shoots (gai mutant) basal buds	GA ₄₁ GA ₇₁ GA ₁ GA ₄ GA ₁₅ GA ₁₉ GA ₂₀ GA ₃₇ GA ₄₄ GA ₅₃	Talon and others (1990c) Nishijima and others (1993)

<i>Avena sativa</i>	inflorescences	GA ₃	Kaufman and others (1976)
<i>Begonia x cheimanthus</i>	leaves	GA ₁ GA ₄ GA ₉ GA ₁₉ GA ₂₀	Oden, Heide (1988)
<i>Betula pendula</i>	vegetative buds	GA ₁ GA ₈ GA ₁₉ GA ₂₀ GA ₂₉	Zanewich, Rood (1994)
<i>Brassica campestris</i>	seedlings	GA ₈₅	Bhaskar and others (1991)
	cotyledons	GA ₈₉	Sheng and others (1992a)
<i>Brassica napus</i>	shoots	GA ₁ GA ₈ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₉ GA ₄₄ GA ₅₁	Sheng and others (1992b)
	stems	GA ₁ GA ₃ GA ₁₉ GA ₂₀	Hedden and others (1989)
	immature siliques	GA ₁ GA ₃ GA ₄ GA ₈ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₉ GA ₃₄ GA ₅₁ GA ₅₃	Rood and others (1987)
			Zanewich, Rood (1993)
<i>Bryophyllum daigremontianum</i>	shoot tips and upper leaves	GA ₂₀	Gaskin and others (1973)
<i>Calonyction aculeatum</i>	immature seeds	GA ₈ GA ₁₇ GA ₁₉ GA ₂₇ GA ₂₉ GA ₃₀ GA ₃₁ GA ₃₃ GA ₃₄	Murofushi and others (1973)
<i>Calysigia soldanella</i>	seeds	GA ₃ GA ₄ GA ₇	Matsuo and others (1984)
<i>Camellia sinensis</i>	leaves	GA ₉ GA ₂₀	Oyama and others (1999)
	leaves, fruitlets	GA ₈	Turnbull (1989)
	endosperm	GA ₁ GA ₃ GA ₈ GA ₁₉ GA ₂₀ GA ₃₈ GA ₄₄	Koshioka and others (1993)
	xylem sap	GA ₉ GA ₁₂ GA ₁₅ GA ₂₀ GA ₄₄ GA ₅₁ GA ₅₃	Oyama and others (1999)
<i>Campanula isophylla</i>	leaves and stems	GA ₁ GA ₁₉ GA ₄₄ GA ₅₃ GA ₉₇	Jensen and others (1996)
<i>Canavalia gladiata</i>	immature seeds	GA ₂₁ GA ₂₂ GA ₅₉	Murofushi and others (1969a,b)
<i>Carica papaya</i>	fruits	GA ₁ GA ₃ GA ₅₅	Yokota, Takahashi (1981)
<i>Carthamus tinctorius</i>	stems	GA ₁ GA ₃ GA ₁₉ GA ₂₀ GA ₂₉	Dathe and others (1991)
			Potter and others (1993)

<i>Cibotium glaucum</i>	sporophytes	GA ₁ GA ₄ GA ₉ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₅ GA ₃₇ GA ₄₀ GA ₅₈ GA ₆₉ GA ₇₀ GA ₇₁ GA ₁₁₁	Yamane and others (1988a)	
<i>Citrus reticulata</i>	developing fruit	GA ₁ GA ₄ GA ₈ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₉ GA ₄₄ GA ₅₃	Talon and others (1992)	
<i>Citrus sinensis</i>	shoots	GA ₁ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄	Poling, Maier (1988)	
		GA ₁ GA ₁₉ GA ₂₀ GA ₂₉	Talon and others (1990a)	
		GA ₈ GA ₂₀ GA ₂₉	Turnbull (1989)	
	leaves	GA ₈ GA ₂₀ GA ₂₉	Turnbull (1989)	
	seeds	GA ₁ GA ₁₉ GA ₂₀ GA ₂₉ GA ₈₁	Turnbull (1989)	
	fruitlets	GA ₃ GA ₈	Turnbull (1989)	
	immature fruit	GA ₁ GA ₄ GA ₈ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉	Poling (1991)	
		GA ₁ GA ₂₉	Talon and others (1990a)	
	<i>Citrus unshiu</i>	reproductive buds	GA ₁ GA ₂₉	Talon and others (1990a)
		developing fruit	GA ₂₀	Talon and others (1990a)
water sprouts		GA ₁	Kawarada, Sumiki (1959)	
young fruit		GA ₁ GA ₄ GA ₉ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₅ GA ₄₄ GA ₅₃	Goto and others (1989)	
		GA ₁ GA ₄ GA ₈ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₉ GA ₄₄ GA ₅₃	Talon and others (1992)	
<i>Corylus avellana</i>	seeds	GA ₁ GA ₉	Williams and others (1974)	
<i>Cucumis melo</i>	mature seeds	GA ₁ GA ₃ GA ₁ GA ₃ GA ₄ GA ₈ GA ₂₀ GA ₃₄	Hemphill and others (1972) Edelstein and others (1995)	
		GA ₁ GA ₃ GA ₄	Hemphill and others (1972)	
<i>Cucumis sativus</i>	mature seeds	GA ₁ GA ₃ GA ₄	Hemphill and others (1972)	
	40-day old shoots of normal and bushy types	GA ₄ GA ₉ GA ₁₅ GA ₂₄ GA ₂₅ GA ₃₄ GA ₅₁	Nakayama and others (1989)	
		61-day old shoots of normal- and bush- types	GA ₄ GA ₉ GA ₁₂ GA ₁₅ GA ₂₄ GA ₂₅ GA ₃₄ GA ₅₁ GA ₇₀	Nakayama and others (1989)

<i>Cucurbita maxima</i>	endosperm	GA ₄₃ GA ₄ GA ₁₂ GA ₁₃ GA ₄₃ GA ₄₉ GA ₅₈ GA ₇₄ GA ₁₁₁ GA ₅₈ GA ₇₄ GA ₁ GA ₈ GA ₂₅ GA ₂₈ GA ₃₆ GA ₄₈	Graebe and others (1974) Blechsmidt and others (1984) Beale and others (1984) Murofushi and others (1988) Lange and others (1993a)
	embryo	GA ₁₃ GA ₂₅ GA ₃₉ GA ₄₃ GA ₄₉ GA ₇₄ GA ₁₁₁ GA ₁ GA ₄ GA ₁₇ GA ₂₈ GA ₃₇ GA ₃₈ GA ₄₈ GA ₈₅ GA ₇₄	Blechsmidt and others (1984) Lange and others (1993b) Murofushi and others (1988)
	mature seed	GA ₃₉	Blechsmidt and others (1984)
<i>Cucurbita pepo</i>	seeds	GA ₃₉ GA ₄₈ GA ₄₉	Fukui and others (1977)
<i>Cyathea australis</i>	sporophytes	GA ₁ GA ₄ GA ₉ GA ₁₅ GA ₂₄ GA ₃₅ GA ₅₈ GA ₆₉ GA ₇₀ GA ₇₁	Yamane and others (1985)
<i>Cytisus scoparius</i>	immature seeds	GA ₃₅	Yamane and others (1971, 1974)
<i>Dalbergia dolichopetala</i>	germinating seed	GA ₁ GA ₃ GA ₄ GA ₅ GA ₈ GA ₂₀ GA ₂₈	Moritz, Montiero (1994)
<i>Daucus carota</i>	somatic cell embryo cultures	GA ₁ GA ₄ GA ₇	Noma and others (1979)
<i>Dendranthema grandiflorum</i>	stem tips	GA ₁ GA ₉ GA ₁₉ GA ₂₀ GA ₄₄ GA ₅₃	Nishijima and others (1997)
<i>Dicksonia antarctica</i>	sporophytes	GA ₄ GA ₉ GA ₁₅ GA ₂₅ GA ₃₇ GA ₁₁₁ GA ₁₁₂	Yamane and others (1988a)
<i>Dioscorea opposita</i>	dormant bulbils	GA ₄ GA ₉ GA ₁₂ GA ₁₉ GA ₂₀ GA ₂₄ GA ₃₆ GA ₅₃	Tanno and others (1992)
<i>Elaeis guineensis</i>	inflorescences	GA ₁₁₀	Owen and others (1998)
<i>Eriobotrya japonica</i>	immature seed	GA ₉ GA ₁₅ GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₅ GA ₄₄ GA ₅₀ GA ₆₁	Koshioka and others (1988)
	immature seed	GA ₉ GA ₁₅ GA ₂₄ GA ₃₅ GA ₅₀ GA ₈₀ GA ₈₄	Yuda and others (1992)

<i>Eucalyptus globulus</i>	cambial region	GA ₁ GA ₄ GA ₈ GA ₉ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄ GA ₈₁	Ridoutt and others (1995)
<i>Eucalyptus nitens</i>	apical buds	GA ₁₉	Hasan and others (1994)
<i>Eustoma grandiflorum</i>	shoots + floral buds	GA ₁ GA ₁₉ GA ₂₀ GA ₄₄ GA ₅₃	Hisamatsu and others (1998b)
<i>Fragaria x ananassa</i> Duch. (short day)	mature leaves (LD)	GA ₁ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄	Taylor and others (1994)
	mature leaves (SD)	GA ₁ GA ₅ GA ₈ GA ₁₉ GA ₂₀ GA ₂₉	Taylor and others (1994)
<i>Fragaria x ananassa</i> Duch. (day neutral)	leaf exudates	GA ₁ GA ₃	Taylor and others (2000b)
	leaves	GA ₁ GA ₃ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉	Taylor and others (2000a)
	immature fruits	GA ₁ GA ₃ GA ₅ GA ₈ GA ₁₂ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄ GA ₄₈ GA ₄₉ GA ₅₃ GA ₇₇ GA ₉₇ GA ₁₁₁ GA ₁₁₂ GA ₁₂₃ GA ₁₂₄ GA ₁₂₅	Blake and others (2000b)
<i>Gentiana triflora</i>	stems and leaves	GA ₁ GA ₁₉ GA ₂₀ GA ₄₄ GA ₅₃	Koshioka and others (1998)
<i>Helianthus annuus</i>	seeds	GA ₆₇ GA ₁ GA ₄ GA ₁₉ GA ₂₀ GA ₄₅ GA ₆₄ GA ₆₅ GA ₆₆ GA ₆₇ GA ₇₂	Dolan, MacMillan (1985) Hutchison and others (1988)
	mature seeds	GA ₇₅ GA ₇₆	Castellaro and others (1990)
<i>Hordeum vulgare</i>	seeds	GA ₁₀₀ GA ₁₀₁ GA ₁₀₂	Owen and others (1996)
	germinating grain	GA ₁ GA ₃ GA ₁ GA ₃ GA ₁₇ GA ₁₉ GA ₂₀ GA ₃₄ GA ₄₈	Yamada (1982) Gaskin and others (1984)
	developing grain	GA ₁ GA ₄ GA ₈ GA ₁₂ GA ₁₇ GA ₂₅ GA ₃₄ GA ₄₈ GA ₆₉	Gaskin and others (1984)
		GA ₁ GA ₃ GA ₈ GA ₉ GA ₁₇ GA ₂₀ GA ₃₄ GA ₄₈	Boother and others (1991)

<i>Hordeum vulgare</i> (continued)	leaf sheaths	GA ₁ GA ₃ GA ₈	Crocker and others (1990)
		GA ₁₉ GA ₂₀ GA ₂₉	
		GA ₉₇	Mander and others (1996)
	seedlings	GA ₁ GA ₃ GA ₈	Boother and others (1991)
		GA ₂₀ GA ₂₉	
	floral apices	GA ₉₇	Mander and others (1996)
<i>Humulus lupulus</i>	shoots	GA ₁₉	Watanabe and others (1978)
<i>Ipomoea batatas</i>	immature seeds	GA ₁ GA ₃ GA ₅	Matsuo and others (1984)
		GA ₁₉ GA ₂₀ GA ₂₃	
	mature seeds	GA ₅ GA ₁₉ GA ₂₀ GA ₂₃	
<i>Ipomoea pes-caprae</i>	immature seeds	GA ₁₉	Matsuo and others (1984)
<i>Ipomoea reptans</i>	immature seeds	GA ₁ GA ₃ GA ₅	Matsuo and others (1984)
		GA ₁₇ GA ₁₉ GA ₂₀	
<i>Juglans regia</i>	unpollinated and pollinated ovaries	GA ₁ GA ₄ GA ₈	Tadeo and others (1994)
		GA ₉ GA ₁₇ GA ₁₉	
		GA ₂₀ GA ₂₉ GA ₄₄	
		GA ₅₃	
<i>Lactuca sativa</i>	shoots	GA ₁ GA ₃ GA ₅	Waycott and others (1991)
		GA ₈ GA ₁₉ GA ₂₀	
		GA ₂₉ GA ₅₃	
	seedlings	GA ₁ GA ₁₉ GA ₂₀	Toyomasu and others (1992)
	mature seeds	GA ₁ GA ₁₇ GA ₁₉	Toyomasu and others (1993)
		GA ₂₀ GA ₇₇	
<i>Lagenaria leucantha</i>	seeds	GA ₅₀ GA ₅₂	Fukui and others (1978)
<i>Lathyrus odoratus</i>	shoots	GA ₁ GA ₈ GA ₂₀	Ross and others (1990)
		GA ₂₉ GA ₈₁	
		GA ₁₉	Ross and others (1992)
<i>Leucaena leucocephala</i>	immature seed	GA ₁ GA ₈ GA ₁₇	Arigayo and others (1983)
		GA ₁₉ GA ₂₀ GA ₂₃	
		GA ₃₄ GA ₅₃	
<i>Lilium elegans</i>	bulbs	GA ₁ GA ₄ GA ₉	Takayama and others (1993)
		GA ₁₂ GA ₁₅ GA ₁₉	
		GA ₂₀ GA ₂₄ GA ₃₄	
		GA ₄₄ GA ₅₁	
<i>Lilium longiflorum</i>	pollen	GA ₁₂ GA ₂₄	Abe and others (1991)
<i>Lolium perenne</i>	leaf tissue	GA ₁ GA ₈ GA ₉	Morvan-Bertrand and others (2001)
		GA ₁₇ GA ₁₉ GA ₂₀	
		GA ₂₉ GA ₄₄ GA ₅₃	
		GA ₉₇	
<i>Lolium temulentum</i>	leaves	GA ₁ GA ₃ GA ₈	Gocal and others (1999)
		GA ₉ GA ₁₉ GA ₂₀	
		GA ₂₉ GA ₄₄ GA ₅₃	

<i>Lupinus albus</i>	seeds	GA ₁ GA ₃ GA ₄ GA ₁₇ GA ₁₈ GA ₂₃ GA ₄₃ GA ₈₂ GA ₈₃	Gaskin and others (1992)
<i>Lupinus luteus</i>	immature seeds	GA ₁₈	Koshimizu and others (1968)
	immature fruits	GA ₁₉ GA ₂₃ GA ₂₈	Fukui and others (1971, 1972)
<i>Lycopersicon esculentum</i>	leaves + shoot tips	GA ₁ GA ₃ GA ₄ GA ₈ GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₁ GA ₅₃	Grunzweig and others (1997)
	seeds	GA ₁ GA ₈ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₅ GA ₂₉ GA ₄₄	Bohner and others (1988)
	pericarp	GA ₁ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉	Bohner and others (1988)
	cultured roots	GA ₁ GA ₃ GA ₉₇	Butcher and others (1988) Mander and others (1996)
	pollinated fruit	GA ₁ GA ₈ GA ₉ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₅ GA ₂₉ GA ₄₄	Koshioka and others (1994)
	parthenocarpic fruit	GA ₁ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄	Koshioka and others (1994)
	fruit	GA ₉₇	Mander and others (1996)
	unpollinated ovaties	GA ₁ GA ₃ GA ₈ GA ₉ GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₃ GA ₈₁	Fos and others (2000)
<i>Lygodium circinnatum</i>	prothallia	GA ₉ GA ₂₀ GA ₇₀ GA ₇₃ GA ₈₈ GA ₉₆ (all as Me esters)	Yamauchi and others (1996)
	gametophytes	GA ₁₀₉	Wynne and others (1998b)
	gametophytes	GA ₁₁₇ (as Me ester)	Wynne and others (1998a)
<i>Lygodium flexuosum</i>	prothallia	GA ₇₃ (as Me ester)	Yamauchi and others (1996)
<i>Lygodium japonicum</i>	prothallia	GA ₉ (as Me ester) GA ₇₃ (as Me ester)	Yamane and others (1979) Yamane and others (1988b)
<i>Malus domestica</i>	immature seeds	GA ₆₈ GA ₁ GA ₃ GA ₄ GA ₇ GA ₈ GA ₉ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₃₄	Dolan, MacMillan (1985) Lin and others (1991)

<i>Malus domestica</i> (continued)	immature seeds	GA ₃₅ GA ₄₄ GA ₅₃	Hedden and others (1993)
		GA ₅₄ GA ₆₁ GA ₆₂	
		GA ₆₃ GA ₆₈	
		GA ₁ GA ₃ GA ₄	
	immature seeds	GA ₇ GA ₉ GA ₁₂	Hedden and others (1993)
		GA ₁₅ GA ₁₇ GA ₁₉	
		GA ₂₀ GA ₂₅ GA ₃₄	
		GA ₃₅ GA ₄₄ GA ₄₅	
		GA ₅₃ GA ₅₄ GA ₆₁	
		GA ₆₂ GA ₆₃ GA ₆₈	
developing seeds	GA ₈₀ GA ₈₄ GA ₈₈	Oyama and others (1996a)	
	GA ₄ GA ₇ GA ₉		
	GA ₁₂ GA ₁₇ GA ₁₉		
	GA ₂₀ GA ₂₅ GA ₃₄		
	GA ₃₅ GA ₄₅ GA ₅₃		
	GA ₅₄ GA ₆₁ GA ₆₂		
	GA ₆₃ GA ₇₀ GA ₇₃		
	GA ₈₀ GA ₈₄ GA ₈₈		
	GA ₁₀₃ GA ₁₀₄ GA ₁₀₅		
	GA ₁₀₆ GA ₁₀₇ GA ₁₀₈		
leaves and buds	GA ₁₉ GA ₂₀	Koshioka and others (1985)	
	GA ₁₅ GA ₁₇ GA ₁₈		
xylem exudate	GA ₁₉ GA ₂₃ GA ₄₄ GA ₅₃	Motosugi and others (1996)	
<i>Magnifera indica</i>	leaves	GA ₁ GA ₃ GA ₁₉	Davenport and others (2001)
		GA ₂₀ GA ₂₉	
<i>Marah macrocarpus</i>	embryos	GA ₄₆	Beeley, MacMillan (1976)
		GA ₁ GA ₃ GA ₄	MacMillan, Gaskin (1996)
		GA ₇ GA ₁₃ GA ₂₅	
		GA ₄₃ GA ₄₆	
	endosperm	GA ₄ GA ₇ GA ₂₄	Beeley and others (1975)
		GA ₂₅ GA ₄₃	
		GA ₃ GA ₄ GA ₇	MacMillan, Gaskin (1996)
		GA ₂₅ GA ₃₇ GA ₄₃	
		GA ₄₆ GA ₆₂	
<i>Mathiola incana</i>	shoots + flower buds	GA ₁ GA ₄ GA ₈ GA ₁₉	Hisamatsu and others (1998a)
		GA ₂₀ GA ₂₄ GA ₃₄	
		GA ₃₇ GA ₅₃ GA ₁₁₂	
<i>Ornithogalum thyroides</i>	inflorescences	GA ₄ GA ₇ GA ₉	Koshioka and others (1999)
		GA ₁₂ GA ₁₅ GA ₁₉	
		GA ₂₀ GA ₂₄ GA ₂₅	
		GA ₅₁ GA ₅₃ GA ₆₁	
		GA ₁₁₂ GA ₁₁₅ GA ₁₂₀	

<i>Orobanche minor</i>	arial parts	GA ₁ GA ₄ GA ₉ GA ₁₂ GA ₁₉ GA ₂₀ GA ₂₄ GA ₃₈ GA ₄₄ GA ₄₇ GA ₅₈	Suzuki and others (1994)	
<i>Oryza sativa</i>	immature seeds	GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₃	Kobayashi and others (1984)	
	spikelets	GA ₄ GA ₁₇ GA ₁₉ GA ₂₀ GA ₃₄	Kobayashi and others (1988)	
	shoots	GA ₁₉	Kurogoshi and others (1979)	
	ears	GA ₁	Suzuki and others (1981)	
		GA ₁₉	Kurogoshi and others (1979)	
		GA ₁ GA ₄ GA ₉	Kobayashi and others (1984)	
		GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₁		
GA ₁₉		Kurogoshi and others (1979)		
<i>Pennisetum glaucum</i>	shoots	GA ₁ GA ₃ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₅₃	Devi and others (1984)	
<i>Pharbitis nil</i>	immature seeds	GA ₂₀ GA ₈ GA ₂₆ GA ₂₇	Murofushi and others (1968) Yokota and others (1971)	
<i>Pharbitis purpurea</i>	immature seeds	GA ₃ GA ₅ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₆ GA ₂₇ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₃	Fujisawa and others (1985)	
<i>Pharbitis tricolor</i>	immature seeds	GA ₁ GA ₃	Matsuo and others (1984)	
<i>Phaseolus coccineus</i>	immature seeds	GA ₁ GA ₅ GA ₆ GA ₈ GA ₁ GA ₃ GA ₅ GA ₆ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀	MacMillan and others (1958, 1960) MacMillan and others (1962) Durley and others (1971)	
		embryo and testa	GA ₁ GA ₅ GA ₆ GA ₁₇ GA ₁₉ GA ₂₀ GA ₃₈ GA ₄₄	Albone and others (1984)
		cotyledonary embryos	GA ₁ GA ₄ GA ₅ GA ₆	Picciarelli, Alpi (1985)
		testa	GA ₈ GA ₂₉	Albone and others (1984)
		suspensors	GA ₁ GA ₄ GA ₅ GA ₆ GA ₈ GA ₄₄	Picciarelli, Alpi (1986)
	dark-grown seedlings	GA ₄	Crozier and others (1971)	
	light-grown seedlings	GA ₁ GA ₄ GA ₅ GA ₂₀	Bowen and others (1973)	

<i>Phaseolus lunatus</i>	stems	GA ₁ GA ₃ GA ₁₉ GA ₂₀ GA ₄₄	Dobert and others (1992a)	
	root nodules	GA ₁ GA ₃ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄	Dobert and others (1992a)	
<i>Phaseolus vulgaris</i>	immature seeds	GA ₁ GA ₅ GA ₆ GA ₈ GA ₁ GA ₄ GA ₈ GA ₃₇ GA ₃₈	West, Phinney (1959), West (1961) Durley and others (1971) Hiraga and others (1974b)	
	seeds (8-10mm)	GA ₁ GA ₅ GA ₆ GA ₈ GA ₁₇ GA ₂₀ GA ₂₉ GA ₃₈	Yamane and others (1977)	
	seeds (ca 15mm)	GA ₁ GA ₄ GA ₅ GA ₆ GA ₈ GA ₂₀ GA ₂₉ GA ₃₇ GA ₃₈ GA ₄₄	Yamane and others (1977)	
	mature seeds	GA ₁ GA ₈	Hiraga and others (1974a,b)	
	<i>Phyllostachys bambusoides</i>	shoots	GA ₁ GA ₁₉ GA ₂₀	Yanagisawa and others (1992)
	<i>Phyllostachys edulis</i>	shoots	GA ₁₉ GA ₁ GA ₂₀	Murofushi and others (1966) Yanagisawa and others (1992)
<i>Picea abies</i>	shoots	GA ₁ GA ₃ GA ₄ GA ₇ GA ₉ GA ₁₂ GA ₁₅ GA ₂₀ GA ₂₉ GA ₃₄ GA ₅₁	Oden and others (1987) Moritz (1995)	
	<i>Picea sitchensis</i>	shoots	GA ₁ GA ₃ GA ₄ GA ₉	Moritz and others (1989)
	<i>Pimpinella anisum</i>	somatic cell embryo cultures	GA ₁ GA ₄ GA ₇	Noma and others (1979)
	<i>Pinus attenuata</i>	pollen	GA ₃ GA ₄ GA ₇	Kamienska and others (1976)
<i>Pinus sylvestris</i>	stems	GA ₁ GA ₃ GA ₄ GA ₉ GA ₁₂ GA ₂₀	Wang and others (1996)	
	needles	GA ₁ GA ₃ GA ₄	Wang and others (1996)	
<i>Pisum sativum</i>	shoots	GA ₁₉ GA ₂₀ GA ₂₉	Davies and others (1982)	
	dark-grown shoots	GA ₁ GA ₈ GA ₁₇ GA ₂₀ GA ₂₉ GA ₈₁	Gaskin and others (1985)	
	internodes	GA ₄	Poole and others (1995)	
	shoot apices	GA ₁ GA ₂₀ GA ₂₉	Ingram and others (1983)	
	parthenocarpic ovaries	GA ₁ GA ₈ GA ₂₀ GA ₂₉	Garcia-Martinez and others (1987a)	
	pollinated ovaries	GA ₁ GA ₃ GA ₈ GA ₁₃ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₃ GA ₆₀ GA ₈₁ GA ₉₁ GA ₁ GA ₈ GA ₂₀ GA ₂₉	Santes and others (1995) Garcia-Martinez and others (1987a)	

<i>Pisum sativum</i> (continued)	ovules	GA ₁ GA ₃ GA ₈ GA ₁₉ GA ₂₀ GA ₂₉	Garcia-Martinez and others (1991)
	fertilised ovules	GA ₄ GA ₇	Rodrigo and others (1997)
	cotyledons	GA ₂₀ GA ₂₉	Sponsel (1983)
	embryonic axes	GA ₂₀ GA ₂₉	Sponsel (1983)
	testa	GA ₂₀ GA ₂₉	Sponsel (1983)
	seeds	GA ₂₀ GA ₂₉	Frydman, MacMillan (1973)
		GA ₉	Frydman and others (1974)
		GA ₁₇ GA ₁₉ GA ₄₄	Gaskin and others (1985)
		GA ₂₀	Eeuwens and others (1973)
		GA ₅₁	Sponsel, MacMillan (1977)
		GA ₁ GA ₈ GA ₂₀	Garcia-Martinez and others (1987a)
		GA ₂₉	
	embryos	GA ₉₈	Mander and others (1996)
	pods	GA ₁ GA ₈ GA ₂₀	Garcia-Martinez and others (1987a)
		GA ₂₉	
GA ₃ GA ₁₇ GA ₁₉		Garcia-Martinez and others (1991)	
GA ₈₁			
GA ₉₇		Mander and others (1996)	
<i>Pithecellobium microcarpum</i>	immature seeds	GA ₁ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀	Koshioka and others (1986)
<i>Polianthes tuberosa</i>	corms	GA ₁ GA ₁₉ GA ₂₀ GA ₅₃	Chang and others (2001)
<i>Populus tremuloides</i>	vegetative buds	GA ₁ GA ₈ GA ₁₉ GA ₂₀	Zanewich, Rood (1994)
<i>Prunus armeniaca</i>	immature seeds	GA ₃₂ GA ₁ GA ₅ GA ₂₉ GA ₃₂	Coombe (1971) Yamaguchi and others (1975a,b) Bottini and others (1985)
<i>Prunus avium</i>	fruitlets	GA ₈₇	Blake and others (1993)
		GA ₁ GA ₃ GA ₅ GA ₁₉ GA ₂₀ GA ₂₉	Blake, Browning (1994)
		GA ₃₂ GA ₈₅ GA ₈₆	
	mature seeds	GA ₃₂ GA ₈₅ GA ₈₆ GA ₈₇	Blake and others (2000a)
	germinating seeds	GA ₁ GA ₃ GA ₅ GA ₁₉ GA ₂₀ GA ₃₂	Blake and others (2000a)
		GA ₈₅ GA ₈₆ GA ₈₇	
		GA ₁ GA ₃ GA ₅ GA ₈ GA ₁₉ GA ₂₀	Blake and others (2000a)
	shoot apices ex 10 wk-old seedlings	GA ₂₉ GA ₃₂ GA ₈₅ GA ₈₆ GA ₈₇	

<i>Prunus avium</i> (continued)	shoot apices ex mature plants	GA ₁ GA ₃ GA ₅ GA ₈ GA ₁₉ GA ₂₀ GA ₂₉	Blake and others (2000a)
<i>Prunus cerasus</i>	seeds	GA ₃ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₅ GA ₃₀ GA ₃₂ GA ₄₄ GA ₈₆ GA ₈₇ GA ₉₅	Nakayama and others (1996)
<i>Prunus domestica</i>	pericarp	GA ₂₉	Reed, Martin (1976)
<i>Prunus persica</i>	seeds	GA ₅ GA ₃₂ GA ₈₆ GA ₃ GA ₉ GA ₁₇ GA ₁₉ GA ₃₀ GA ₄₄ GA ₆₃ GA ₆₈ GA ₈₇ GA ₉₅ GA ₉₇ GA ₁₁₈ GA ₁₁₉ GA ₁₂₀ GA ₁₂₁ GA ₁₂₂ GA ₁₂₆	Yamaguchi and others (1975a,b) Bhaskar and others (1991) Nakayama (2001)
<i>Prunus spachiana</i>	shoots	GA ₁ GA ₁₅ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄	Kobayashi and others (1996)
<i>Pseudotsuga menziesii</i>	shoots	GA ₁ GA ₃ GA ₄ GA ₇ GA ₉	Doumas and others (1992)
<i>Psilotum nudum</i>	fronds	GA ₃₆	Takahashi and others (1984)
<i>Pyrus communis</i>	seeds	GA ₄₅ GA ₁₇ GA ₂₅ GA ₄₅ GA ₄₅ , GA ₆₃ GA ₆₈	Bearder and others (1975) Martin and others (1977) Dolan and others (1985)
<i>Pyrus malus</i>	seeds	GA ₆₁ GA ₆₂	Kirkwood, MacMillan (1982)
<i>Quamoclit pennata</i>	seeds	GA ₃ GA ₅ GA ₁₇	Matsuo and others (1984)
<i>Raphanus sativus</i>	mature seeds	GA ₁ GA ₅ GA ₈ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₅ GA ₄₀ GA ₇₇ GA ₁₁₆	Nakayama and others (1990, 1998)
	leaves and/or stems	GA ₁ GA ₄ GA ₉ GA ₁₂ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₅ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₁	Nakayama and others (1995)
	shoots	GA ₁₁₁ GA ₁₁₂ GA ₁₁₃ GA ₁₁₄ GA ₁₁₅ GA ₁₁₆	Nakayama and others (1998)
<i>Rhizophora mucranata</i>	leaves	GA ₃ GA ₅ GA ₉	Ganguly, Sircar (1974)
<i>Rumex acetosa</i>	shoots	GA ₁ GA ₄ GA ₉ GA ₁₉ GA ₂₀ GA ₅₃	Rijinders and others (1997)
<i>Rumex palustris</i>	shoots	GA ₁ GA ₄ GA ₉ GA ₁₉ GA ₂₀ GA ₅₃	Rijinders and others (1997)

<i>Saccharum spp</i>	leaves and shoot	GA ₁ GA ₃ GA ₁₉	Kuhnle and others (1983)			
	apical meristems	GA ₂₀ GA ₂₉				
<i>Salix pentandra</i>	apices	GA ₄ GA ₃₆	Koshioka and others (1984)			
	shoots	GA ₁ GA ₁₉ GA ₂₀ GA ₂₉	Davies and others (1985)			
	catkins	GA ₁ GA ₁₉	Davies and others (1985)			
	roots	GA ₁ GA ₈ GA ₁₉ GA ₂₉ GA ₅₆	Olsen and others (1994)			
<i>Sasa kurilensis</i>	shoots	GA ₁ GA ₁₉ GA ₂₀	Yanagisawa and others (1992)			
<i>Secale cereale</i>	plants (<i>sic</i>)	GA ₁ GA ₃	Eckert and others (1978)			
	immature ears	GA ₁₉ GA ₂₀ GA ₂₄ GA ₅₄ GA ₅₅ GA ₆₀	Dathe and others (1989)			
<i>Secchium edule</i>	embryo	GA ₁ GA ₃ GA ₄ GA ₇ GA ₈ GA ₁₇ GA ₂₅ GA ₂₉ GA ₃₈ GA ₄₄	Albone and others (1984)			
		endosperm		GA ₁ GA ₃ GA ₄ GA ₇ GA ₁₃ GA ₁₇ GA ₂₅ GA ₃₈ GA ₄₄	Albone and others (1984)	
		testa		GA ₁ GA ₃ GA ₇ GA ₈ GA ₁₂ GA ₁₃ GA ₁₅ GA ₁₉ GA ₂₅ GA ₂₇ GA ₂₉ GA ₄₄ GA ₅₃		
	<i>Silene armeria</i>	shoots	GA ₁ GA ₈ GA ₁₂ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄ GA ₅₃	Talon, Zeevaart (1990)		
		<i>Solanum tuberosum</i>	immature berries		GA ₁₅ GA ₂₀	Jones and others (1988)
			<i>Sonneratia apelata</i>		leaves	GA ₁ GA ₃
<i>Spinacia oleracea</i>	shoots	GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄ GA ₅₃ GA ₁ GA ₄ GA ₅ GA ₇ GA ₈ GA ₉ GA ₁₂ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₁ GA ₅₃ GA ₆₀ GA ₈₁	Metzger, Zeevaart (1980a) Talon and others (1991)			
				GA ₉₇ GA ₉₈ GA ₉₉	Zeevaart and others (1993)	
				GA ₁₁₀	Mander and others (1996)	
		leaves			Owen and others (1998)	
		roots		GA ₁₉ GA ₂₉ GA ₄₄	Metzger, Zeevaart (1980b)	
	<i>Stevia rebaudiana</i>	stems + leaves	GA ₂₀	Alves, Ruddat (1979)		

<i>Thlaspi arvense</i>	shoots	GA ₁ GA ₈ GA ₉ GA ₁₂ GA ₁₅ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₅ GA ₂₉ GA ₄₄ GA ₅₁ GA ₅₃	Metzger, Mardaus (1986)
<i>Trifolium repens</i>	arial parts	GA ₁ GA ₄ GA ₉ GA ₁₉ GA ₂₀ GA ₄₄	Suzuki and others (1994)
<i>Triticum aestivum</i>	shoots	GA ₁ GA ₃ GA ₄ GA ₈ GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₃	Appleford, Lenton (1991)
	leaves, roots	GA ₁ GA ₃	Eckert and others (1978)
	leaves, stems	GA ₁ GA ₃ GA ₄ GA ₇	Jensen, Junttila (1987)
	expanding internode	GA ₁ GA ₃ GA ₄ GA ₈ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₃	Webb and others (1998)
	young ears	GA ₁ GA ₃ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄ GA ₅₃ GA ₉₇ GA ₉₈	Webb and others (1998)
	developing grain	GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₄₄ GA ₅₄ GA ₅₅ GA ₆₀ GA ₆₁ GA ₆₂ GA ₉₁ GA ₉₂	Gaskin and others (1980)
	mature grain	GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₇₉ GA ₇₉ GA ₉₀ GA ₉₃ GA ₉₄	Kirkwood, MacMillan (1982) Penny and others (1994) Lenton and others (1994) Penny and others (1993) Findlow and others (1997)
<i>Vicia faba</i>	immature seeds	GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄ GA ₅₃ GA ₉₈	Sponsel and others (1979)
<i>Vigna unguiculata / sinensis</i>	shoots	GA ₁ GA ₂₀	Garcia-Martinez and others(1987b)
	stems	GA ₁ GA ₃ GA ₈ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄	Dobert and others (1992b)
	root nodules	GA ₁ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄	Dobert and others (1992b)
	hypocotyls	GA ₁ GA ₄ GA ₉ GA ₂₀ GA ₅₁	Okatomoto and others (1995)
	leaf, petiole, epicotyl	GA ₃ GA ₂₀	Garcia-Martinez and others (1987b)

<i>Vitis vinifera</i>	seedless berries	GA ₁₇ GA ₁₉	Perez and others (2000)
	seeds, seeded berries	GA ₁ GA ₃ GA ₁₇ GA ₁₉	Perez and others (2000)
<i>Vitis vinifera</i> x <i>V. rupestris</i>	somatic embryos	GA ₄ GA ₉	Takeno and others (1983)
<i>Wisteria floribunda</i>	immature seeds	GA ₁₈ GA ₂₃	Koshimizu and others (1972)
<i>Zea mays</i>	shoots	GA ₁ GA ₃ GA ₄ GA ₅ GA ₇ GA ₈ GA ₉ GA ₁₂ GA ₁₅ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₄ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₃	Fujioka and others (1988a,b)
	young tassels	GA ₁ GA ₈ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₄₄ GA ₅₃	Heupel and others (1985)
	pollen	GA ₁ GA ₉ GA ₂₀ GA ₉₈	Yamaguchi and others (1990) Mander and others (1996)
	silk	GA ₃	Murofushi and others (1991)
	immature seeds	GA ₁ GA ₈ GA ₉ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₃₄ GA ₄₄ GA ₅₃	Murofushi and others (1991)
	callus ex embryo	GA ₁ GA ₁₇ GA ₁₉ GA ₂₀ GA ₂₉ GA ₅₃	Talo and others (1995)

Table 3 Occurrence of Individual Gibberellins in Fungi

Fungus	GA	Reference
<i>Gibberella fujikuroi</i>	GA ₁	Takahashi and others (1955) Stodola and others (1955, 1957), Grove and others (1958)
	GA ₂	Takahashi and others (1955), Grove (1961)
	GA ₃	Cross (1954), Stodola and others (1955) Takahashi and others (1955)
	GA ₄	Takahashi and others (1957)
	GA ₇ GA ₉	Cross and others (1962)
	GA ₁₀	Hanson (1966)
	GA ₁₁	Brown and others (1967)
	GA ₁₂	Cross and Norton (1965)
	GA ₁₃	Galt (1965)
	GA ₁₄	Cross (1966)
	GA ₁₅	Hanson (1967)
	GA ₁₆	Galt (1968)
	GA ₂₀	McInnes and others (1977)
	GA ₂₄ GA ₂₅	Harrison and MacMillan (1971)
	GA ₃₆ GA ₃₇	Bearder and MacMillan (1973)
	GA ₄₀	Yamaguchi and others (1975)
	GA ₄₁ GA ₄₂	Bearder and MacMillan (1973)
	GA ₄₇	MacMillan and Wels (1974) Beeley and MacMillan (1976)
	GA ₅₄ GA ₅₅ GA ₅₆	Murofushi and others (1979)
	GA ₅₇	
GA ₇₈	Willis (1990)	
<i>Phaeosphaeria</i> sp. L487	GA ₁ GA ₄ GA ₉	Kawaide and others (1995)
	GA ₁₂ GA ₁₅ GA ₂₄	
	GA ₂₅	
	GA ₈₂	Seto and others (1995)
<i>Sphaceloma bidentis</i>	GA ₄ GA ₉ GA ₁₃	Rademacher (1992)
	GA ₁₄ GA ₁₅ GA ₂₄	
<i>Sphaceloma manihiticola</i>	GA ₄	Rademacher and Graebe (1979) Zeigler and others (1980)
	GA ₉ GA ₁₃ GA ₁₄	Rademacher (1992)
	GA ₁₅ GA ₂₄ GA ₂₅	
	GA ₃₆ GA ₃₇	
<i>Sphaceloma menthea</i>	GA ₄ GA ₉ GA ₁₃	Rademacher (1992)
	GA ₁₄ GA ₁₅ GA ₂₄	
<i>Sphaceloma perseae</i>	GA ₄ GA ₁₃ GA ₁₄	Rademacher (1992)
	GA ₂₄	

Sphaceloma rhois GA₄ GA₉ GA₁₃ Rademacher (1992)
GA₁₄ GA₁₅ GA₂₄

Table 4. Occurrence of Individual Gibberellins in Bacteria

Bacterium	GA	Reference
<i>Acetobacter diazotrophicus</i>	GA ₁ GA ₃	Bastian and others (1998)
<i>Azospirillum lipoferum</i>	GA ₁ GA ₃	Bottini and others (1989)
<i>Azospirillum brasilense</i>	GA ₁ GA ₃	Janzen and others (1992)
<i>Bacillus licheniformis</i>	GA ₁ GA ₃ GA ₄ GA ₂₀	Gutierrez-Manero and others (2001)
<i>Bacillus pumilus</i>	GA ₁ GA ₃ GA ₄ GA ₂₀	Gutierrez-Manero and others (2001)
<i>Herbospirillum seropedicae</i>	GA ₃	Bastian and others (1998)
<i>Rhizobium phaseoli</i>	GA ₁ GA ₄	Atzhorn and others (1988)

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