

# Antifreeze proteins enable plants to survive in freezing conditions

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## Supplementary material

**Supplementary table 1.** All plants in which antifreeze activity has been detected till date\*

S. No.	Scientific name	Common name	References
1	<i>Acaenamagellanica</i>	Prickly burr	Doucet <i>et al.</i> 2000
2	<i>Acer saccharoides</i>	Maple	Doucet <i>et al.</i> 2000
3	<i>Agrostistenuis</i>	Creeping bentgrass	Doucet <i>et al.</i> 2000
4	<i>Alliarapetiolata</i>	Garlic mustard	Urrutia <i>et al.</i> 1992
5	<i>Ammopiptanthusmongolicus</i>	Evergreen legume	Wang <i>et al.</i> 2003
6	<i>Aster cordifolius</i>	Wood aster	Urrutia <i>et al.</i> 1992
7	<i>Avena sativa</i>	Oat	Antikainen and Griffith 1997
8	<i>Bambusoidea</i> sp.	Bamboo	Doucet <i>et al.</i> 2000
9	<i>Barbarea vulgaris</i>	Winter cress	Urrutia <i>et al.</i> 1992
10	<i>Brassica oleracea</i>	Cabbage, kale	Urrutia <i>et al.</i> 1992; Antikainen and Griffith 1997
11	<i>Bromus inermis</i>	Bromograss	Nakamura <i>et al.</i> 2008
12	<i>Buddleia davidii</i>	Butterfly bush	Doucet <i>et al.</i> 2000
13	<i>Calluna</i> sp.	Heather	Doucet <i>et al.</i> 2000
14	<i>Carexaquatilis</i>	Water sedge	Doucet <i>et al.</i> 2000
15	<i>Cerastiumfontanum</i>	Chickweed	Doucet <i>et al.</i> 2000
16	<i>Chimonanthus praecox</i>	Wintersweet	Zhang <i>et al.</i> 2011
17	<i>Colobanthusquitensis</i>	Antarctic pearlwort	Doucet <i>et al.</i> 2000
18	<i>Daucuscarota</i>	Carrot	Duman and Olsen 1993; Worrall <i>et al.</i> 1998; Meyer <i>et al.</i> 1999; Smallwood <i>et al.</i> 1999; Zhang <i>et al.</i> 2004
19	<i>Deschampsia antarctica</i>	Antarctic hairgrass	Doucet <i>et al.</i> 2000; Bravo and Griffith 2004; John <i>et al.</i> 2009; Chew <i>et al.</i> 2012
20	<i>Dicentra cucullaria</i>	Dutchman's breeches	Duman and Olsen 1993
21	<i>Euphorbia serpens</i>	Spurge	Urrutia <i>et al.</i> 1992
22	<i>Festuca contracta</i>	Fescue	Doucet <i>et al.</i> 2000
23	<i>Festuca rubra</i>	Fescue	Doucet <i>et al.</i> 2000
24	<i>Forsythia suspensa</i>	Weeping forsythia	Doucet <i>et al.</i> 2000
25	<i>Geranium</i> sp.	Geranium	Doucet <i>et al.</i> 2000
26	<i>Hemerocallis fulva</i>	Daylily	Duman and Olsen 1993
27	<i>Hippophae rhamnoides</i>	Seabuckthorn	Gupta and Deswal 2012; Gupta and Deswal 2014

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28	<i>Hordeumvulgare</i>	Barley	Antikainen and Griffith 1997
29	<i>Hydrophyllumvirginianum</i>	Virginia waterleaf	Urrutia <i>et al.</i> 1992
30	<i>Juncussquarrosus</i>	Heath rush	Doucet <i>et al.</i> 2000
31	<i>Loliumperenne</i>	Perennial ryegrass	Sidebottom <i>et al.</i> 2000; Pudney <i>et al.</i> 2003
32	<i>Northofagusantarctica</i>	Beech	Doucet <i>et al.</i> 2000
33	<i>Oxalis sp.</i>	Wood sorrel	Doucet <i>et al.</i> 2000
34	<i>Parodiochloaflabellata</i>	Tussac grass	Doucet <i>et al.</i> 2000
35	<i>Phleumalpium</i>	Timothy	Doucet <i>et al.</i> 2000
36	<i>Piceaabies</i>	Norway spruce	Jarzabek <i>et al.</i> 2009
37	<i>Piceapungens</i>	Colorado spruce, blue spruce	Jarzabek <i>et al.</i> 2009
38	<i>Plantagolanceolata</i>	Aarrow leaf plantain	Urrutia <i>et al.</i> 1992
39	<i>Poaannua</i>	Bluegrass	Doucet <i>et al.</i> 2000; Urrutia <i>et al.</i> 1992
40	<i>Poapratensis</i>	Bluegrass	Doucet <i>et al.</i> 2000; Urrutia <i>et al.</i> 1992
41	<i>Polemoniumcaerulum</i>	Jacob's ladder	Doucet <i>et al.</i> 2000
42	<i>Polystichummohroides</i>	Shasta fern	Doucet <i>et al.</i> 2000
43	<i>Populusdeltoides</i>	Eastern cottonwood	Duman and Olsen 1993
44	<i>Prunuspersica</i>	Peach	Wisniewski <i>et al.</i> 1999
45	<i>Pseudotsugamenziesii</i>	Douglas fir	Zamani <i>et al.</i> 2003
46	<i>Quercus alba</i>	White oak	Duman and Olsen 1993
47	<i>Ranunculus biternatus</i>	Buttercup	Doucet <i>et al.</i> 2000
48	<i>Raphanussativus</i>	Japanese radish	Kawahara <i>et al.</i> 2009
49	<i>Rhodiolaalgida</i>		Lu <i>et al.</i> 2000
50	<i>Rostkoviamagellanica</i>	Brown rush	Doucet <i>et al.</i> 2000
51	<i>Rumexacetosella</i>	Sheep sorrel	Doucet <i>et al.</i> 2000
52	<i>Salix fragilis</i>	Crack willow	Doucet <i>et al.</i> 2000
53	<i>Sambucusnigra</i>	Elder	Doucet <i>et al.</i> 2000
54	<i>Secalecereale</i>	Winter and spring rye	Antikainen and Griffith 1997; Griffith <i>et al.</i> 1992
55	<i>Solanumdulcamara</i>	Bittersweet nightshade	Urrutia <i>et al.</i> 1992; Duman 1994; Huang and Duman 2001
56	<i>Solanumtuberosum</i>	Potato	Urrutia <i>et al.</i> 1992
57	<i>Stellariamedia</i>	Chickweed	Urrutia <i>et al.</i> 1992
58	<i>Taraxacumofficinale</i>	Dandelion	Urrutia <i>et al.</i> 1992
59	<i>Triticumaestivum</i>	Winter and spring wheat	Antikainen and Griffith 1997; Duman and Olsen 1993
60	<i>Vinca minor</i>	Periwinkle	Doucet <i>et al.</i> 2000
61	<i>Viola sp.</i>	Violet	Urrutia <i>et al.</i> 1992

\*Updated from Griffith and Yaish 2004