

Supplementary Table 1. Lineage and source information of representative plant species with genomes sequenced that were used to search the BAHF family proteins.

Species	Taxonomy	Source
<i>Actinidia chinensis</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;asterids;Ericales;Actinidiaceae;Actinidia	<a href="http://bioinfo.tl.cornell.edu/cgi-bin/kiwi/download.cgi">http://bioinfo.tl.cornell.edu/cgi-bin/kiwi/download.cgi</a>
<i>Amborella trichopoda</i>	basalMagnoliophyta;Amborellales;Amborellaceae;Amborella	<a href="http://plants.ensembl.org/species.html">http://plants.ensembl.org/species.html</a>
<i>Aquilegia coerulea</i>	Mesangiospermae;eudicotyledons;stemEudicotyledons;Ranunculales;Ranunculaceae;Thalictridae;Aquilegia	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Arabidopsis thaliana</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;malvids;Brassicales;Brassicaceae;Camelineae;Arabidopsis	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Beta vulgaris</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;Caryophyllales;Amaranthaceae;Betoideae;Beta	<a href="http://bvsq.molgen.mpg.de/Genome/Download/RefBeet-1.2">http://bvsq.molgen.mpg.de/Genome/Download/RefBeet-1.2</a>
<i>Carica papaya</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;malvids;Brassicales;Caricaceae;Carica	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Castanea mollissima</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Fagales;Fagaceae;Castanea	<a href="http://www.hardwoodgenomics.org/chinese-chestnut-genome#genomedownloads">http://www.hardwoodgenomics.org/chinese-chestnut-genome#genomedownloads</a>
<i>Citrullus lanatus</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Cucurbitales;Cucurbitaceae;Benicaceae;Citrullus	<a href="http://www.icugi.org/cgi-bin/CuGI/genome/home.cgi?organism=watermelon&amp;ver=1">http://www.icugi.org/cgi-bin/CuGI/genome/home.cgi?organism=watermelon&amp;ver=1</a>
<i>Citrus sinensis</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;malvids;Sapindales;Rutaceae;Aurantioideae;Citrus	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Coffea canephora</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;asterids;lamiiids;Gentianales;Rubiaceae;Ixoroideae;Coffeae;Coffea	<a href="http://coffee-genome.org/download">http://coffee-genome.org/download</a>
<i>Cucumis sativus</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Cucurbitales;Cucurbitaceae;Benicaceae;Cucumis	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Dianthus caryophyllus</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;Caryophyllales;Caryophyllaceae;Dianthus	<a href="ftp://ftp.kazusa.or.jp/pub/carnation/Gene_set/">ftp://ftp.kazusa.or.jp/pub/carnation/Gene_set/</a>
<i>Erythranthe guttata</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;asterids;lamiiids;Lamiales;Phrymaceae;Erythranthe	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Eucalyptus grandis</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;malvids;Myrtales;Myrtaceae;Myrtoideae;Eucalyptae;Eucalyptus	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Eutrema salsugineum</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;malvids;Brassicales;Brassicaceae;Eutremaceae;Eutrema	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Fragaria vesca</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Rosales;Rosaceae;Rosoidae;Potentilleae;Fragariinae;Fragaria	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Gossypium raimondii</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;malvids;Malvales;Malvaceae;Malvoideae;Gossypium	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Ipomoea trifida</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;asterids;lamiiids;Solanales;Convolvulaceae;Ipomoeae;Ipomoea	<a href="http://sweetpotato-garden.kazusa.or.jp/">http://sweetpotato-garden.kazusa.or.jp/</a>
<i>Jatropha curcas</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Malpighiales;Euphorbiaceae;Crotonoideae;Jatrophaeae;Jatropha	<a href="ftp://ftp.kazusa.or.jp/pub/jatropha/">ftp://ftp.kazusa.or.jp/pub/jatropha/</a>
<i>Kalanchoe marnieriana</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;Saxifragales;Crassulaceae;Kalanchoe	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Linum usitatissimum</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Malpighiales;Linaceae;Linum	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Malus domestica</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Rosales;Rosaceae;Maloidae;Maleae;Malus	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Medicago truncatula</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Fabales;Fabaceae;Papilionoideae;Trifolieae;Medicago	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Morus notabilis</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Rosales;Moraceae;Morus	<a href="http://www.ncbi.nlm.nih.gov/genome/?term=Morus+notabilis">http://www.ncbi.nlm.nih.gov/genome/?term=Morus+notabilis</a>
<i>Musa acuminata</i>	Mesangiospermae;Liliopsida;Petrosaviidae;commelinids;Zingiberales;Musaceae;Musa	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Nelumbo nucifera</i>	Mesangiospermae;eudicotyledons;stemEudicotyledons;Proteales;Nelumbonaceae;Nelumbo	<a href="http://lotus-db.wbgcas.cn/genome_download/sequence/">http://lotus-db.wbgcas.cn/genome_download/sequence/</a>
<i>Oryza sativa</i>	Mesangiospermae;Liliopsida;Petrosaviidae;commelinids;Poales;Poaceae;BOPClade;Oryzoideae;Oryzaceae;Oryzinae;Oryza	<a href="http://plants.ensembl.org/species.html">http://plants.ensembl.org/species.html</a>
<i>Panicum virgatum</i>	Mesangiospermae;Liliopsida;Petrosaviidae;commelinids;Poales;Poaceae;PACMADclade;Panicoideae;Panicoideae;Paniceae;Paniceae;Panicum	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Phaseolus vulgaris</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Fabales;Fabaceae;Papilionoideae;Phaseoleae;Phaseolus	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Populus trichocarpa</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Malpighiales;Salicaceae;Saliceae;Populus	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Ricinus communis</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;fabids;Euphorbiales;Euphorbiaceae;Acalyphoideae;Acalyphaeae;Ricinus	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Sesamum indicum</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;asterids;lamiiids;Lamiales;Pedaliaceae;Sesamum	<a href="http://ocri-genomics.org/Sinbase/login.htm">http://ocri-genomics.org/Sinbase/login.htm</a>
<i>Solanum lycopersicum</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;asterids;lamiiids;Solanales;Solanaceae;Solanaceae;Solanaceae;Solanum;Lycopersicon	<a href="https://plants.ensembl.org/species.html">https://plants.ensembl.org/species.html</a>
<i>Spirodela polyrhiza</i>	Mesangiospermae;Liliopsida;Alismatales;Araceae;Lemnoideae;Spirodela	<a href="https://phytozome.jgi.doe.gov/pz/portal.html">https://phytozome.jgi.doe.gov/pz/portal.html</a>
<i>Tarenaya hassleriana</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;malvids;Brassicales;Cleomaceae;Tarenaya	<a href="http://www.ncbi.nlm.nih.gov/genome/?term=Tarenaya%20hassleriana">http://www.ncbi.nlm.nih.gov/genome/?term=Tarenaya%20hassleriana</a>
<i>Vitis vinifera</i>	Mesangiospermae;eudicotyledons;Gunneridae;Pentapetalae;rosids;rosids;Vitales;Vitaceae;Vitis	<a href="http://plants.ensembl.org/species.html">http://plants.ensembl.org/species.html</a>
<i>Zea mays</i>	Mesangiospermae;Liliopsida;Petrosaviidae;commelinids;Poales;Poaceae;PACMADclade;Panicoideae;Andropogonaeae;Andropogoneae;Tripsacinae	<a href="http://plants.ensembl.org/species.html">http://plants.ensembl.org/species.html</a>