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Mitchell, R. A. C. 2024. Identification of universal grass genes and estimates of their monocot-/ commelinid-/ grass-specificity. *Bioinformatics Advances*. p. vbaf079. <https://doi.org/10.1093/bioadv/vbaf079>

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# All files downloaded from from /ensemblgenomes/pub/release-56/plan

# Grass species

species	taxon
Brachypodium_distachyon	Monocot/Commelinid/Grass/BOP
Hordeum_vulgare	Monocot/Commelinid/Grass/BOP
Leersia_perrieri	Monocot/Commelinid/Grass/BOP
Lolium_perenne	Monocot/Commelinid/Grass/BOP
Oryza_rufipogon	Monocot/Commelinid/Grass/BOP
Oryza_sativa	Monocot/Commelinid/Grass/BOP
Secale_cereale	Monocot/Commelinid/Grass/BOP
Triticum_aestivum	Monocot/Commelinid/Grass/BOP
Echinochloa_crus-galli	Monocot/Commelinid/Grass/PACMAD
Eragrostis_curvula	Monocot/Commelinid/Grass/PACMAD
Panicum_hallii_HAL2	Monocot/Commelinid/Grass/PACMAD
Saccharum_spontaneum	Monocot/Commelinid/Grass/PACMAD
Setaria_italica	Monocot/Commelinid/Grass/PACMAD
Setaria_viridis	Monocot/Commelinid/Grass/PACMAD
Sorghum_bicolor	Monocot/Commelinid/Grass/PACMAD
Zea_mays	Monocot/Commelinid/Grass/PACMAD

# non-grass species used for testing specificity

species	taxon
Actinidia_chinensis	Dicots
Beta_vulgaris	Dicots
Cannabis_sativa_female	Dicots
Citrullus_lanatus	Dicots
Citrus_clementina	Dicots
Coffea_canephora	Dicots
Corchorus_capsularis	Dicots
Cucumis_melo	Dicots
Cucumis_sativus	Dicots
Cynara_cardunculus	Dicots
Daucus_carota	Dicots
Gossypium_raimondii	Dicots
Helianthus_annuus	Dicots
Ipomoea_triloba	Dicots
Malus_domestica_golden	Dicots
Manihot_esculenta	Dicots
Olea_europaea_sylvestris	Dicots
Pistacia_vera	Dicots
Populus_trichocarpa	Dicots
Prunus_avium	Dicots
Prunus_dulcis	Dicots
Prunus_persica	Dicots
Rosa_chinensis	Dicots
Theobroma_cacao_matina	Dicots
Vitis_vinifera	Dicots
Arabidopsis_halleri	Dicots / Brassicaceae
Arabidopsis_lyrata	Dicots / Brassicaceae

Arabidopsis_thaliana	Dicots / Brassicaceae
Arabis_alpina	Dicots / Brassicaceae
Brassica_napus	Dicots / Brassicaceae
Brassica_oleracea	Dicots / Brassicaceae
Brassica_rapa	Dicots / Brassicaceae
Camelina_sativa	Dicots / Brassicaceae
Glycine_max	Dicots/Fabaceae
Lupinus_angustifolius	Dicots/Fabaceae
Medicago_truncatula	Dicots/Fabaceae
Phaseolus_vulgaris	Dicots/Fabaceae
Trifolium_pratense	Dicots/Fabaceae
Vigna angularis	Dicots/Fabaceae
Vigna_radiata	Dicots/Fabaceae
Capsicum_annuum	Dicots/Solanaceae
Nicotiana_attenuata	Dicots/Solanaceae
Solanum_lycopersicum	Dicots/Solanaceae
Solanum_tuberosum	Dicots/Solanaceae
Dioscorea_rotundata	Monocot
Musa_acuminata	Monocot/Commelinid
Ananas_comosus	Monocot/Commelinid
Amborella_trichopoda	other
Chara_braunii	other
Chlamydomonas_reinhardtii	other
Chondrus_crispus	other
Cyanidioschyzon_merolae	other
Galdieria_sulphuraria	other
Marchantia_polymorpha	other
Nymphaea_colorata	other
Ostreococcus_lucimarinus	other
Physcomitrella_patens	other
Selaginella_moellendorffii	other

ts [Apr-2023]

all gene models pep sequence file

Brachypodium\_distachyon.Brachypodium\_distachyon\_v3.0.pep.all

Hordeum\_vulgare.MorexV3\_pseudomolecules\_assembly.pep.all

Leersia\_perrieri.Lperr\_V1.4.pep.all.fa

Lolium\_perenne.MPB\_Lper\_Kyuss\_1697.pep.all.fa

Oryza\_rufipogon.OR\_W1943.pep.all.fa

Oryza\_sativa.IRGSP-1.0.pep.all.fa

Secale\_cereale.Rye\_Lo7\_2018\_v1p1p1.pep.all.fa

Triticum\_aestivum.IWGSC.pep.all.fa

Echinochloa\_crusgalli.ec\_v3.pep.all.fa

Eragrostis\_curvula.CERZOS\_E.curvula1.0.pep.all.fa

Panicum\_hallii.PhalliiHAL\_v2.1.pep.all.fa

Saccharum\_spontaneum.Sspon.HiC\_chr\_asm.pep.all.fa

Setaria\_italica.Setaria\_italica\_v2.0.pep.all.fa

Setaria\_viridis.Setaria\_viridis\_v2.0.pep.all.fa

Sorghum\_bicolor.Sorghum\_bicolor\_NCBIv3.pep.all.fa

Zea\_mays.Zm-B73-REFERENCE-NAM-5.0.pep.all.fa

all gene models pep sequence file

Actinidia\_chinensis.Red5\_PS1\_1.69.0.pep.all.fa

Beta\_vulgaris.RefBeet-1.2.2.pep.all.fa

Cannabis\_sativa\_female.cs10.pep.all.fa

Citrullus\_lanatus.Cla97\_v1.pep.all.fa

Citrus\_clementina.Citrus\_clementina\_v1.0.pep.all.fa

Coffea\_canephora.AUK\_PRJEB4211\_v1.pep.all.fa

Corchorus\_capsularis.CCACVL1\_1.0.pep.all.fa

Cucumis\_melo.Melonv4.pep.all.fa

Cucumis\_sativus.ASM407v2.pep.all.fa

Cynara\_cardunculus.CcrdV1.pep.all.fa

Daucus\_carota.ASM162521v1.pep.all.fa

Gossypium\_raimondii.Graimondii2\_0.pep.all.fa

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Ipomoea\_triloba.ASM357664v1.pep.all.fa

Malus\_domestica\_golden.ASM211411v1.pep.all.fa

Manihot\_esculenta.Manihot\_esculenta\_v6.pep.all.fa

Olea\_europaea\_sylvestris.O\_europaea\_v1.pep.all.fa

Pistacia\_vera.PisVer\_v2.pep.all.fa

Populus\_trichocarpa.Pop\_tri\_v3.pep.all.fa

Prunus\_avium.PAV\_r1.0.pep.all.fa

Prunus\_dulcis.ALMONDv2.pep.all.fa

Prunus\_persica.Prunus\_persica\_NCBIv2.pep.all.fa

Rosa\_chinensis.RchiOBHm-V2.pep.all.fa

Theobroma\_cacao\_matina.Theobroma\_cacao\_20110822.pep.all

Vitis\_vinifera.12X.pep.all.fa

Arabidopsis\_halleri.Ahal2.2.pep.all.fa

Arabidopsis\_lyrata.v.1.0.pep.all.fa

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Brassica\_rapa.Brapa\_1.0.pep.all.fa  
Camelina\_sativa.Cs.pep.all.fa  
Glycine\_max.Glycine\_max\_v2.1.pep.all.fa  
Lupinus\_angustifolius.LupAngTanjil\_v1.0.pep.all.fa  
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Vigna\_radiata.Vradiata\_ver6.pep.all.fa  
Capsicum\_annuum.ASM51225v2.pep.all.fa  
Nicotiana\_attenuata.NIATTr2.pep.all.fa  
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Ananas\_comosus.F153.pep.all.fa  
Amborella\_trichopoda.AMTR1.0.pep.all.fa  
Chara\_braunii.Cbr\_1.0.pep.all.fa  
Chlamydomonas\_reinhardtii.Chlamydomonas\_reinhardtii\_v5.5.p  
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Cyanidioschyzon\_merolae.ASM9120v1.pep.all.fa  
Galdieria\_sulphuraria.ASM34128v1.pep.all.fa  
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Oryza\_sativa.IRGSP-1.0.dna\_rm.toplevel.fa  
Secale\_cereale.Rye\_Lo7\_2018\_v1p1p1.dna\_rm.primary\_assembl  
Triticum\_aestivum.IWGSC.dna\_rm.chromosome.??fa  
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Panicum\_hallii.PhalliiHAL\_v2.1.dna\_rm.toplevel.fa  
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Sorghum\_bicolor.Sorghum\_bicolor\_NCBIv3.dna\_rm.toplevel.fa  
Zea\_mays.Zm-B73-REFERENCE-NAM-5.0.dna\_rm.toplevel.fa

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genome annotation file

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Hordeum\_vulgare.MorexV3\_pseudomolecules\_assembly.56.gff3

Leersia\_perrieri.Lperr\_V1.4.56.gff3

Lolium\_perenne.MPB\_Lper\_Kyuss\_1697.56.gff3

Oryza\_rufipogon.OR\_W1943.56.gff3

Oryza\_sativa.IRGSP-1.0.56.gff3

Secale\_cereale.Rye\_Lo7\_2018\_v1p1p1.56.gff3

Triticum\_aestivum.IWGSC.56.gff3

Echinochloa\_crusgalli.ec\_v3.56.gff3

Eragrostis\_curvula.CERZOS\_E.curvula1.0.56.gff3

Panicum\_hallii.PhalliiHAL\_v2.1.56.gff3

Saccharum\_spontaneum.Sspon.HiC\_chr\_asm.56.gff3

Setaria\_italica.Setaria\_italica\_v2.0.56.gff3

Setaria\_viridis.Setaria\_viridis\_v2.0.56.gff3

Sorghum\_bicolor.Sorghum\_bicolor\_NCBIv3.56.gff3

Zea\_mays.Zm-B73-REFERENCE-NAM-5.0.56.gff3