

**Table S4. Information about NCED protein sequences used for phylogenetic analysis.** PYL protein sequences used in phylogenetic analysis. The sequences of PYLs from *Arabidopsis thaliana*, *Fragaria vesca*, *Malus domestica*, *Oryza sativa*, *Setaria italica*, *Vitis vinifera*, *Zea mays*, *Ricinus communis*, *Physcomitrium patens*, and *Theobroma cacao* are available in National Center for Biotechnology Information (<https://www.ncbi.nlm.nih.gov/>). *Triticum aestivum*, *Hordeum vulgare*, *Sorghum bicolor*, *Brachypodium distachyon* genomes are available in the Ensembl plants <https://plants.ensembl.org/index.html>. *Nicotiana tabacum* sequences are available in Bai et al., 2019.

Specie	Protein name	Accession ID
<i>Arabidopsis thaliana</i>	AtPYL1	NP_001331305.1
<i>Arabidopsis thaliana</i>	AtPYL10	NP_194521.2
<i>Arabidopsis thaliana</i>	AtPYL11	NP_199398.1
<i>Arabidopsis thaliana</i>	AtPYL12	NP_199399.1
<i>Arabidopsis thaliana</i>	AtPYL13	NP_193597.1
<i>Arabidopsis thaliana</i>	AtPYL2	NP_180174.1
<i>Arabidopsis thaliana</i>	AtPYL3	NP_177443.1
<i>Arabidopsis thaliana</i>	AtPYL4	NP_565887.1
<i>Arabidopsis thaliana</i>	AtPYL5	NP_196163.1
<i>Arabidopsis thaliana</i>	AtPYL6	NP_565928.1
<i>Arabidopsis thaliana</i>	AtPYL7	NP_567208.1
<i>Arabidopsis thaliana</i>	AtPYL8	NP_200128.1
<i>Arabidopsis thaliana</i>	AtPYL9	NP_563626.1
<i>Fragaria vesca</i>	FvPYL13a	XP_004293952.1
<i>Fragaria vesca</i>	FvPYL13b	XP_004293951.1
<i>Fragaria vesca</i>	FvPYL13c	XP_011460608.1
<i>Fragaria vesca</i>	FvPYL2	XP_004291031.1
<i>Fragaria vesca</i>	FvPYL3	XP_004300241.1
<i>Fragaria vesca</i>	FvPYL4	XP_004302617.1
<i>Fragaria vesca</i>	FvPYL6	XP_004308958.1
<i>Fragaria vesca</i>	FvPYL7	XP_004306686.1
<i>Fragaria vesca</i>	FvPYL8a	XP_011470277.1
<i>Fragaria vesca</i>	FvPYL8b	XP_004308004.1

<i>Fragaria vesca</i>	FvPYL8c	XP_011470277.1
<i>Malus domestica</i>	MdPYL1	XP_008350612.1
<i>Malus domestica</i>	MdPYL10	XP_008377517.1
<i>Malus domestica</i>	MdPYL11	XP_028945528.1
<i>Malus domestica</i>	MdPYL12	XP_008351952.1
<i>Malus domestica</i>	MdPYL13	XP_008341960.1
<i>Malus domestica</i>	MdPYL2	XP_008343633.2
<i>Malus domestica</i>	MdPYL3	XP_008380616.1
<i>Malus domestica</i>	MdPYL4	XP_008370174.2
<i>Malus domestica</i>	MdPYL5	XP_008371472.1
<i>Malus domestica</i>	MdPYL6	XP_008373570.1
<i>Malus domestica</i>	MdPYL7	XP_008376112.1
<i>Malus domestica</i>	MdPYL8	XP_008369296.1
<i>Malus domestica</i>	MdPYL9	XP_008376697.2
<i>Oryza sativa Japonica</i>	OsPYL1	XP_015612857.1
<i>Oryza sativa Japonica</i>	OsPYL10	XP_015627042.1
<i>Oryza sativa Japonica</i>	OsPYL11	XP_015627042.1
<i>Oryza sativa Japonica</i>	OsPYL12	XP_025878812.1
<i>Oryza sativa Japonica</i>	OsPYL13	BAD46118.1
<i>Oryza sativa Japonica</i>	OsPYL2	XP_015641755.1
<i>Oryza sativa Japonica</i>	OsPYL3	XP_015624786.1
<i>Oryza sativa Japonica</i>	OsPYL4	XP_015643625.1
<i>Oryza sativa Japonica</i>	OsPYL5	XP_015638073.1
<i>Oryza sativa Japonica</i>	OsPYL6	XP_015628032.1
<i>Oryza sativa Japonica</i>	OsPYL7	XP_015641993.1
<i>Oryza sativa Japonica</i>	OsPYL8	XP_015641857.1
<i>Oryza sativa Japonica</i>	OsPYL9	XP_015642160.1
<i>Setaria italica</i>	SiPYL1	XP_004983564.1
<i>Setaria italica</i>	SiPYL2	XP_004951427.1
<i>Setaria italica</i>	SiPYL3	XP_004966082.1
<i>Setaria italica</i>	SiPYL4	XP_004961771.1

<i>Setaria italica</i>	SiPYL5	XP_004970455.1
<i>Setaria italica</i>	SiPYL6	XP_012700774.1
<i>Setaria italica</i>	SiPYL7	XP_004984885.1
<i>Setaria italica</i>	SiPYL8	XP_004951286.1
<i>Setaria italica</i>	SiPYL9	XP_004960624.1
<i>Vitis vinifera</i>	VvPYL11	XP_002272779.1
<i>Vitis vinifera</i>	VvPYL2	XP_010648333.1
<i>Vitis vinifera</i>	VvPYL4	XP_002277562.1
<i>Vitis vinifera</i>	VvPYL6	XP_002272779.1
<i>Vitis vinifera</i>	VvPYL8	XP_002270037.3
<i>Vitis vinifera</i>	VvPYL9	XP_002281200.1
<i>Zea mays</i>	ZmPYL1	NP_001343946.1
<i>Zea mays</i>	ZmPYL10	NP_001336882.1
<i>Zea mays</i>	ZmPYL11	NP_001140789.1
<i>Zea mays</i>	ZmPYL12	XP_035821091.1
<i>Zea mays</i>	ZmPYL13	PWZ11971.1
<i>Zea mays</i>	ZmPYL2	NP_001150686.2
<i>Zea mays</i>	ZmPYL3	NP_001170038.1
<i>Zea mays</i>	ZmPYL4	NP_001136477.1
<i>Zea mays</i>	ZmPYL5	NP_001148260.1
<i>Zea mays</i>	ZmPYL6	NP_001306656.1
<i>Zea mays</i>	ZmPYL7	NP_001169534.1
<i>Zea mays</i>	ZmPYL8	NP_001334791.1
<i>Zea mays</i>	ZmPYL9	NP_001140969.1
<i>Triticum aestivum</i>	TaPYL1A	TraesCS1A01G191700
<i>Triticum aestivum</i>	TaPYL1B	TraesCS1B01G206600
<i>Triticum aestivum</i>	TaPYL1C	TraesCS1D01G195300
<i>Triticum aestivum</i>	TaPYL2A	TraesCS3A01G154400
<i>Triticum aestivum</i>	TaPYL2D	TraesCS3D01G161500
<i>Triticum aestivum</i>	TaPYL3A	TraesCS7A01G358200
<i>Triticum aestivum</i>	TaPYL3B	TraesCS7B01G269600

<i>Triticum aestivum</i>	TaPYL3D	TraesCS7D01G364600
<i>Triticum aestivum</i>	TaPYL4A	TraesCS2A01G089400
<i>Triticum aestivum</i>	TaPYL4B	TraesCS2B01G105300
<i>Triticum aestivum</i>	TaPYL4D	TraesCS2D01G087500
<i>Triticum aestivum</i>	TaPYL5A	TraesCS3A01G348400
<i>Triticum aestivum</i>	TaPYL5B	TraesCS3B01G380300
<i>Triticum aestivum</i>	TaPY5D	TraesCS3D01G342000
<i>Triticum aestivum</i>	TaPYL6A	TraesCS1A01G297600
<i>Triticum aestivum</i>	TaPYL6B	TraesCS1B01G306800
<i>Triticum aestivum</i>	TaPYL6D	TraesCS1D01G293600
<i>Triticum aestivum</i>	TaPYL7A	TraesCS4A01G114400
<i>Triticum aestivum</i>	TaPYL7B	TraesCS4B01G189800
<i>Triticum aestivum</i>	TaPYL7D	TraesCS4D01G191200
<i>Triticum aestivum</i>	TaPYL8A	TraesCS1A01G126800
<i>Triticum aestivum</i>	TaPYL8B	TraesCS1B01G145800
<i>Triticum aestivum</i>	TaPYL8D	TraesCS1D01G126900
<i>Triticum aestivum</i>	TaPYL9A	TraesCS7A01G350800
<i>Triticum aestivum</i>	TaPYL9B	TraesCS7B01G232100
<i>Triticum aestivum</i>	TaPYL9D	TraesCS7D01G328000
<i>Hordeum vulgare</i>	HvPYL1	HORVU1Hr1G050110
<i>Hordeum vulgare</i>	HvPYL2	HORVU7Hr1G088140
<i>Hordeum vulgare</i>	HvPYL3	HORVU3Hr1G031380
<i>Hordeum vulgare</i>	HvPYL4	HORVU3Hr1G088100
<i>Hordeum vulgare</i>	HvPYL5	HORVU3Hr1G039010
<i>Hordeum vulgare</i>	HvPYL6	HORVU1Hr1G070420
<i>Hordeum vulgare</i>	HvPYL7	HORVU4Hr1G055220
<i>Hordeum vulgare</i>	HvPYL8	HORVU7Hr1G079270
<i>Hordeum vulgare</i>	HvPYL9	HORVU3Hr1G107030
<i>Sorghum bicolor</i>	SbPYL1	Sobic.001G289100
<i>Sorghum bicolor</i>	SbPYL2	Sobic.004G097800
<i>Sorghum bicolor</i>	SbPYL3	Sobic.010G169100

<i>Sorghum bicolor</i>	SbPYL4	Sobic.001G403300
<i>Sorghum bicolor</i>	SbPYL5	Sobic.009G170700
<i>Sorghum bicolor</i>	SbPYL6	Sobic.003G342000
<i>Sorghum bicolor</i>	SbPYL7	Sobic.009G080200
<i>Sorghum bicolor</i>	SbPYL8	Sobic.004G113800
<i>Brachypodium distachyon</i>	BdPYL1	Bradi3g34070
<i>Brachypodium distachyon</i>	BdPYL2	Bradi3g08580
<i>Brachypodium distachyon</i>	BdPYL3	Bradi1g37810
<i>Brachypodium distachyon</i>	BdPYL4	Bradi1g16710
<i>Brachypodium distachyon</i>	BdPYL5	Bradi1g65130
<i>Brachypodium distachyon</i>	BdPYL6	Bradi2g22510
<i>Brachypodium distachyon</i>	BdPYL7	Bradi2g53840
<i>Brachypodium distachyon</i>	BdPYL8	Bradi3g09580
<i>Brachypodium distachyon</i>	BdPYL9	Bradi2g32250
<i>Ricinus comunis</i>	RcPYRL1	XP_002519819.1
<i>Ricinus comunis</i>	RcPYRL2	XP_002516457.1
<i>Ricinus comunis</i>	RcPYRL3	XP_002526675.1
<i>Ricinus comunis</i>	RcPYRL4	XP_002520792.1
<i>Ricinus comunis</i>	RcPYRL5	XP_002523369.1
<i>Ricinus comunis</i>	RcPYRL6	XP_002513580.1
<i>Ricinus comunis</i>	RcPYRL7	XP_002509950.1
<i>Physcomitrium patens</i>	PpPYL9	XP_024380918.1
<i>Physcomitrium patens</i>	PpPYL8	XP_024366744.1
<i>Physcomitrium patens</i>	PpPYL9	XP_024385413.1
<i>Theobroma cacao</i>	TcPYRL1	XP_007039500.1
<i>Theobroma cacao</i>	TcPYRL2	EOY29881.1
<i>Theobroma cacao</i>	TcPYRL3	XP_007024469.1
<i>Theobroma cacao</i>	TcPYRL4	XP_007026589.1
<i>Theobroma cacao</i>	TcPYRL5	EOY17664.1
<i>Theobroma cacao</i>	TcPYRL6	XP_007025367.1
<i>Theobroma cacao</i>	TcPYRL7	EOY24998.1

<i>Theobroma cacao</i>	TcPYRL8	EOY23471.1
<i>Theobroma cacao</i>	TcPYRL9	XP_007051579.1
<i>Nicotiana tabacum</i>	NtPYL1	Ntab0128790
<i>Nicotiana tabacum</i>	NtPYL2	Ntab0298740
<i>Nicotiana tabacum</i>	NtPYL3	Ntab0331800
<i>Nicotiana tabacum</i>	NtPYL4	Ntab0409250
<i>Nicotiana tabacum</i>	NtPYL5	Ntab0524600
<i>Nicotiana tabacum</i>	NtPYL6	Ntab0746900
<i>Nicotiana tabacum</i>	NtPYL7	Ntab0790100
<i>Nicotiana tabacum</i>	NtPYL8	Ntab0830710
<i>Nicotiana tabacum</i>	NtPYL9	Ntab0986250
<i>Nicotiana tabacum</i>	NtPYL10	Ntab0025750
<i>Nicotiana tabacum</i>	NtPYL11	Ntab0143100
<i>Nicotiana tabacum</i>	NtPYL12	Ntab0143110
<i>Nicotiana tabacum</i>	NtPYL13	Ntab0350690
<i>Nicotiana tabacum</i>	NtPYL14	Ntab0528630
<i>Nicotiana tabacum</i>	NtPYL15	Ntab0012440
<i>Nicotiana tabacum</i>	NtPYL16	Ntab0764650
<i>Nicotiana tabacum</i>	NtPYL17	Ntab0430230
<i>Nicotiana tabacum</i>	NtPYL18	Ntab0710100
<i>Nicotiana tabacum</i>	NtPYL19	Ntab0177250
<i>Nicotiana tabacum</i>	NtPYL20	Ntab0568440
<i>Nicotiana tabacum</i>	NtPYL21	Ntab0424430
<i>Nicotiana tabacum</i>	NtPYL22	Ntab0906880
<i>Nicotiana tabacum</i>	NtPYL23	Ntab0217080
<i>Nicotiana tabacum</i>	NtPYL24	Ntab0010710
<i>Nicotiana tabacum</i>	NtPYL25	Ntab0725950
<i>Nicotiana tabacum</i>	NtPYL26	Ntab0504840
<i>Nicotiana tabacum</i>	NtPYL27	Ntab0868560
<i>Nicotiana tabacum</i>	NtPYL28	Ntab0282050

*Nicotiana tabacum*

NtPYL29

Ntab0734960

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