

Gene_Symbol	Gene_ID	Function	reference	Os_Fam	Os_symbol	MSU_ID	PSP score	PLAAC score
ERD14	AT1G76180	stress protein, early responsive to dehydration	Van Lindt et al., 2021, Commun Biol	dehydrin gene family	OsjDHN2	LOC_Os02g44870	0.9855	
					OsjDHN1	LOC_Os01g50700	0.8539	
					OsjDHN3	LOC_Os03g45280	0.988	
					OsjDHN4	LOC_Os11g26570	0.993	
					OsjDHN5	LOC_Os11g26750	0.9869	
					OsjDHN6	LOC_Os11g26760	0.9987	
					OsjDHN7	LOC_Os11g26780	0.9978	
					OsjDHN8	LOC_Os11g26790	0.9983	
ARF19	AT1G19220	auxin signaling pathway	Emenecker et al., 2021, Cell Commun Signal; Powers et al., 2019, Mol Cell	auxin response factor (ARF) family	ARF16	LOC_Os01g13520	0.9205	
					ARF2	LOC_Os01g70270	0.9703	
					ARF3	LOC_Os01g54990	0.9084	
					ARF5	LOC_Os02g04810	0.9758	40.831
					ARF6A	LOC_Os02g06910	0.944	33.632
					ARF7	LOC_Os02g35140	0.9244	
					ARF7A	LOC_Os06g48950	0.9957	58.992
					ARF7B	LOC_Os08g40900	0.9951	32.694
					ARF9	LOC_Os04g36054	0.9702	
					ARF10	LOC_Os06g47150	0.6791	
					ARF13	LOC_Os04g59430	0.796	
					ARF14	LOC_Os05g43920	0.9688	
					ARF17	LOC_Os06g46410	0.9929	40.741
					ARF20	LOC_Os07g08520	0.681	
					ARF22	LOC_Os10g33940	0.608	
					ARF24	LOC_Os12g29520	0.9802	
RBGD4 RBGD2	AT4G14300 AT2G33410	heat resistance	Zhu et al., 2022, Dev Cell	RNA binding glycine-rich gene superfamily	OsRBGD4	LOC_Os10g33230	0.9971	76.244
					OsRBGD2	LOC_Os08g23120	0.9856	17.357
					OsRBGA1	LOC_Os01g68790	0.9899	
					OsRBGA2	LOC_Os03g46770	0.9975	21.244

					OsRBGA3	LOC_Os07g41120	0.7942	17.142
					OsRBGA4	LOC_Os10g17454	0.9954	32.409
					OsRBGA5	LOC_Os12g31800	0.9964	32.391
					OsRBGA6	LOC_Os12g43600	0.9957	24.099
					OsRBGB1	LOC_Os03g47800	0.6359	
					OsRBGB2	LOC_Os03g61990	0.9595	
					OsRBGD1	LOC_Os02g12850	0.9961	39.768
					OsRBGD3	LOC_Os08g38410	0.9796	14.819
ATG3 ATG8e	AT5G61500 AT2G45170	autophagy	Guan & Xue, 2022, Sci Bull	autophagy-related (ATG) gene family	ATG1A	LOC_Os03g16130	0.9667	
					ATG4A	LOC_Os03g27350	0.728	
					ATG9A	LOC_Os03g14380	0.7236	
					ATG13B	LOC_Os04g45570	0.8981	
					ATG18E	LOC_Os01g57720	0.9888	
					ATG18F	LOC_Os05g33610	0.9616	
ALBA4 ALBA5 ALBA6	AT1G20220 AT1G76010 AT3G07030	thermotolerance under heat stress; stress granules (SGs) and processing bodies (PBs)	Tong et al., 2022, Nat Plants	acetylation lowers binding affinity	OsAlba4	LOC_Os03g06980	0.9976	56.152
					OsAlba5	LOC_Os04g34940	0.9789	
					OsAlba6	LOC_Os06g40040	0.0119	
					OsAlba3	LOC_Os03g52490	0.9976	43.006
					OsAlba7	LOC_Os09g37006	0.9835	
					OsAlba8	LOC_Os11g06760	0.9873	
AGO4 AGO1 AGO7	AT2G27040 AT1G48410 AT1G69440	Cajal body dicing bdy dicing bdy	Li et al., 2006, Cell; Li et al., 2008, PLoS Genet Tomassi et al., 2020, Plant Physiol Jouannet et al., 2012, EMBO J	ARGONAUTE	OsAGO4a	LOC_Os01g16870	0.7228	
					OsAGO1a	LOC_Os02g45070	0.8205	22.778
					OsAGO2	LOC_Os04g52540	0.9769	20.66
					OsAGO3	LOC_Os04g52550	0.7505	
					OsAGO12	LOC_Os03g47820	0.8817	
					OsAGO14	LOC_Os07g09020	0.8733	15.47
					OsAGO15	LOC_Os01g16850	0.7215	
					OsAGO18	LOC_Os07g28850	0.9716	35.028
WRKY70	AT3G56400	plant immunity	Zavaliev et al., 2020, Cell	WRKY gene family	WRKY70	LOC_Os05g39720	0.9982	14.305
					OsWRKY1	LOC_Os01g14440	0.9748	

					OsWRKY2	LOC_Os10g42850	0.8869	
					OsWRKY3	LOC_Os03g55080	0.9464	
					OsWRKY4	LOC_Os03g55164	0.774	
					OsWRKY5	LOC_Os05g04640	0.9436	
					OsWRKY9	LOC_Os01g18584	0.8976	
					OsWRKY16	LOC_Os01g47560	0.9887	
					OsWRKY17	LOC_Os01g74140	0.9228	
					OsWRKY18	LOC_Os10g18099	0.787	
					OsWRKY21	LOC_Os01g60640	0.7954	
					OsWRKY25	LOC_Os08g13840	0.923	
					OsWRKY27	LOC_Os01g40430	0.8441	
					OsWRKY32	LOC_Os02g53100	0.9719	
					OsWRKY35	LOC_Os04g39570	0.9705	
					WRKY37	LOC_Os04g50920	0.9326	
					WRKY39	LOC_Os02g16540	0.9947	
					WRKY40	LOC_Os11g02530	0.8225	
					WRKY43	LOC_Os05g49210	0.9852	
					WRKY48	LOC_Os05g40060	0.8034	
					WRKY49	LOC_Os05g49100	0.9208	
					WRKY52	LOC_Os11g02470	0.9907	
					OsWRKY59	LOC_Os01g51690	0.91	
					WRKY60	LOC_Os03g45450	0.8566	
					WRKY61	LOC_Os11g45850	0.7782	
					WRKY64	LOC_Os12g02450	0.8906	
					WRKY66	LOC_Os02g47060	0.935	
					WRKY67	LOC_Os05g09020	0.7787	
					WRKY68	LOC_Os04g51560	0.9622	
					WRKY73	LOC_Os06g05380	0.9708	
					WRKY74	LOC_Os09g16510	0.8172	
					WRKY77	LOC_Os01g40260	0.7474	

					WRKY79	LOC_Os03g21710	0.9886	
					WRKY81	LOC_Os03g33012	0.9577	
					WRKY83	LOC_Os05g50680	0.8827	
					WRKY84	LOC_Os05g40070	0.9757	
					WRKY88	LOC_Os07g40570	0.715	
					WRKY94	LOC_Os12g40570	0.8652	
					WRKY96	LOC_Os12g32250	0.9882	
					WRKY102	LOC_Os01g08710	0.9334	
					WRKY107	LOC_Os01g09080	0.815	
					WRKY113	LOC_Os06g06360	0.9176	
					WRKY115	LOC_Os07g27670	0.9096	
					WRKY116	LOC_Os01g60520	0.8566	
					WRKY118	LOC_Os08g09900	0.8894	
TMF	Solyc09g090180	flowering	Huang et al., 2021, Nat Chem Biol; Huang et al., 2022, Genome Biol	ALOG gene family	OsG1	LOC_Os07g04670	0.9736	
TFAM1	Solyc02g069510	flowering transition	Huang et al., 2022, Genome Biol		OsG1L2, G2L	LOC_Os06g46030	0.9559	
TFAM2	Solyc05g055020				OsG1L6	LOC_Os02g56610	0.9944	
TFAM3	Solyc09g025280				OsG1L8	LOC_Os05g39500	0.7619	
TFAM11					OsG1L9, G9L	LOC_Os05g28040	0.9295	
					OsG1L10	LOC_Os01g54180	0.7506	
Flowering network								
ELF3	AT2G25930	thermosensor, flowering	Jung et al., 2020, Nature; Wilkinson et al., 2020, Mol Cell		Hd17, Ef7, OsELF3	LOC_Os06g05060	0.9936	
ELF4	AT2G40080	thermosensor, photoperiodic flowering	Kim et al., 2013, Cell Rep; Jung et al., 2020, Nature					
FLL2	AT1G67170	flowering, mRNA processing	Fang et al, 2019, Nature			LOC_Os02g09890	0.9931	21.292
FCA	AT4G16280	flowering, mRNA processing	Fang et al, 2019, Nature		OsFCA	LOC_Os09g03610	0.9947	63.136
FY	AT5G13480	flowering, mRNA processing	Fang et al, 2019, Nature					
FPA	AT2G43410	flowering, mRNA processing	Fang et al, 2019, Nature			LOC_Os09g34070	0.9584	17.834
CPSF30	AT1G30460	flowering, mRNA processing	Fang et al, 2019, Nature		CPSF30	LOC_Os06g46400	0.9977	43.847
CPSF100	AT5G23880	flowering, mRNA processing	Fang et al, 2019, Nature			LOC_Os09g39590	0.3815	

LD	AT4G02560	flowering	Chakrabortee et al., 2016, Proc Natl Acad Sci U S A					
HRLP	AT2G44710	flowering, alternative splicing	Zhang et al., 2022, Sci Adv			LOC_Os04g45930	0.9704	13.509
PhyB	AT2G18790	flowering, light and temperature sensing	Chen et al., 2022, Mol Cell		OsphyB	LOC_Os03g19590	0.3805	
CRY2	AT1G04400	flowering, circadian clock	Wang et al., 2021, Nat Plants; Mo et al., 2022, Nat Commun		OsCRY2	LOC_Os02g41550	0.4172	
MTA, EMB1706	AT4G10760	flowering, circadian clock	Wang et al., 2021, Nat Plants		OsMTA2	LOC_Os02g45110	0.7178	
VRN1	AT3G18990	flowering	Zhou et al., 2019, Angew Chem Int Ed Engl					
Dicing body, processing body								
SERRATE (SE)	AT2G27100	dicing body, mRNA processing	Xie et al., 2021, Nat Cell Biol		Du13	LOC_Os06g48530	0.9909	
HYL1	AT1G09700	dicing body, mRNA processing	Xie et al., 2021, Nat Cell Biol		OsHYL1	LOC_Os11g01869	0.4773	
DCL1	AT1G01040	dicing body, mRNA processing	Xie et al., 2021, Nat Cell Biol		OsDCL1	LOC_Os03g02970	0.2327	
AGO1	AT1G48410	dicing body, mRNA processing	Tomassi et al., 2020, Plant Physiol		OsAGO1b	LOC_Os04g47870	0.8797	29.398
CARP9	AT3G21290	dicing body, mRNA processing	Tomassi et al., 2020, Plant Physiol					
RH6	AT2G45810	dicing body, plant immunity	Li et al., 2021, Sci Adv			LOC_Os10g35990	0.7186	40.497
RH8	AT4G00660	dicing body, plant immunity	Li et al., 2021, Sci Adv			LOC_Os02g42860	0.53	32.759
						LOC_Os04g45040	0.3888	26.343
RH12	AT3G61240	dicing body, plant immunity	Li et al., 2021, Sci Adv			LOC_Os10g35990	0.7186	40.497
TSN1	AT5G07350	stress granules (SGs) and processing bodies (PBs), plant immunity	Gutierrez-Beltran et al., 2015, Plant Cell		OsTudor-SN	LOC_Os02g32350	0.0766	
TSN2	AT5G61780	stress granules (SGs) and processing bodies (PBs), plant immunity	Gutierrez-Beltran et al., 2015, Plant Cell			LOC_Os04g32960	0.3418	
EMB1579	AT2G03150	flowering, mRNA splicing	Zhang et al., 2020, PLoS Biol					
CBP20	AT5G44200	mRNA splicing, microRNA biogenesis			Du3, OsCBP20	LOC_Os02g39890	0.3727	
CBP80	AT2G13540	mRNA splicing, microRNA biogenesis			OsCBP80	LOC_Os03g22570	0.0725	
					ZOS2-3	LOC_Os02g05610	0.9711	
					ZOS8-11	LOC_Os08g40560	0.9343	
					RSZp21a	LOC_Os06g08840	0.9065	
					RSZp21b	LOC_Os02g54770	0.7077	
					RSZp23	LOC_Os02g39720	0.9788	
					RSp29	LOC_Os04g02870	0.1497	

					DHT1	LOC_Os04g54440	0.9865	24.692
					DRB-2	LOC_Os12g01916	0.8566	
	AT3G60370	alternative splicing, stress tolerance			OsFKBP20	LOC_Os01g62610	0.0153	
SR45	AT1G16610	alternative splicing, stress tolerance			SR45	LOC_Os01g72890	0.9969	
Plant immunity								
NPR1	AT1G64280	plant immunity	Zavaliev et al., 2020, Cell		OsNPR1, NH1	LOC_Os01g09800	0.1583	
CUL3	AT1G26830	plant immunity	Zavaliev et al., 2020, Cell		OsCUL3a	LOC_Os02g51180	0.3477	
WRKY70	AT3G56400	plant immunity	Zavaliev et al., 2020, Cell		OsWRKY18	LOC_Os01g60520	0.8566	
GBPL1	AT1G03830	plant immunity	Huang et al., 2021, Nature			LOC_Os02g20410	0.2758	
GBPL3	AT5G46070	plant immunity	Huang et al., 2021, Nature; Kim et al., 2022, Nature; Tang et al., 2022, PLoS Biol			LOC_Os02g20410	0.2758	
AtFH1	AT3G25500	plant immunity	Sun et al., 2021, Nat Commun		OsFH1	LOC_Os01g67240	0.9926	
AtFH6	AT5G67470	plant immunity	Sun et al., 2021, Nat Commun			LOC_Os03g10680	0.9773	
						LOC_Os07g39920	0.9779	
						LOC_Os10g20710	0.9819	
RH6	AT2G45810	dicing body, plant immunity	Li et al., 2021, Sci Adv			LOC_Os10g35990	0.7186	40.497
RH8	AT4G00660	dicing body, plant immunity	Li et al., 2021, Sci Adv			LOC_Os02g42860	0.53	32.759
						LOC_Os04g45040	0.3888	26.343
RH12	AT3G61240	dicing body, plant immunity	Li et al., 2021, Sci Adv			LOC_Os10g35990	0.7186	40.497
AtUBP1c	AT3G14100	plant immunity	Zhou et al., 2021, Cell Discov			LOC_Os07g42380	0.8045	
						LOC_Os11g40510	0.9344	
Other reported PSPs								
Rubisco	ATCG00490	carboxysome biogenesis, pyrenoid	Wang et al., 2019, Nature; He et al., 2020, Nat Plants			LOC_Os10g21268	0.0086	
Nup98	AT1G59660	separating nuclear and cytoplasmic contents; transporting proteins and RNAs	Schmidt & Görlich, 2015, Elife			LOC_Os01g28690	0.9904	
						LOC_Os12g06870	0.9859	26.574
ADCP1	AT1G09320	heterochromatin formation; transposon silencing	Zhao et al., 2019, Cell Res			LOC_Os05g04180	0.0233	
						LOC_Os11g35050	0.5156	
						LOC_Os11g35060	0.6504	

H2B.8	AT1G08170	chromatin compaction	Buttress et al., 2022, Nature			LOC_Os09g39730	0.2746	
FIB2, MED36A	AT4G25630	stress granules, virus-host interactions	Brown et al., 2021, PLoS Pathog			LOC_Os02g57590	0.8968	
						LOC_Os05g08360	0.855	
STT1, EMB139, EMB506	AT5G40160	intra-chloroplast cargo sorting	Ouyang et al., 2020, Cell					
STT2, EMB16, EMB2036	AT5G66055	intra-chloroplast cargo sorting	Ouyang et al., 2020, Cell					
OE23	AT1G06680	intra-chloroplast cargo sorting	Ouyang et al., 2020, Cell		OsPsbP	LOC_Os07g04840	0.6313	
FLOE1	AT4G28300	seed germination, water stress sensing	Dorone et al., 2021, Cell			LOC_Os01g48220	0.4456	
						LOC_Os01g55050	0.9971	90.077
						LOC_Os05g48760	0.7188	33.14
FLOE2	AT5G14540	seed germination, water stress sensing	Dorone et al., 2021, Cell			LOC_Os01g07520	0.9869	43.697
FLOE3	AT3G01560	seed germination, water stress sensing	Dorone et al., 2021, Cell			LOC_Os05g07730	0.9967	35.98
SGS3	AT5G23570	cytoplasmic granules, siRNA formation	Kumakura et al., 2009, FEBS Lett			LOC_Os12g09580	0.974	
						LOC_Os12g09590	0.9258	
RDR6, SGS2	AT3G49500	cytoplasmic granules, siRNA formation	Kumakura et al., 2009, FEBS Lett		OsRDR6; SHL2	LOC_Os01g34350	0.1179	
LEA9	AT1G72100	hydration dependent cytoplasmic condensates	Ginsawaeng et al., 2021, Biomolecules			LOC_Os04g35490	0.4495	
LEA42	AT4G21020	hydration dependent cytoplasmic condensates	Ginsawaeng et al., 2021, Biomolecules			LOC_Os04g52110	0.0319	
LEA48	AT5G44310	hydration dependent cytoplasmic condensates	Ginsawaeng et al., 2021, Biomolecules			LOC_Os04g52110	0.0319	
SEUSS	AT1G43850	hyperosmotic stress tolerance	Wang et al., 2022, Nat Chem Biol			LOC_Os11g10060	0.9971	26.537
						LOC_Os11g10070	0.9966	36.159
SUVR2	AT5G43990	DNA repair body, DSB repair	Liu et al., 2022, Mol Plant			LOC_Os02g40770	0.9739	
PP2C5, AP2C3	AT2G40180	CO2 sensor	Zhang et al., 2022, Nat Cell Biol			LOC_Os03g18150	0.4557	
PP2C74	AT5G36250	CO2 sensor	Zhang et al., 2022, Nat Cell Biol			LOC_Os02g27220	0.6382	