

Table S7 DEGs involved in reproductive development and cell wall formation processes

Term	Up	Down	Up_Gene	Down_Gene	Category	GO.ID
pollen sperm cell differentiation	2	0	AT3G50310(MAPKKK20), AT5G55020(ATMYB120)	-	BP	GO:0048235
gametophyte development	2	3	AT3G50310(MAPKKK20), AT5G55020(ATMYB120)	AT3G18000(NMT1), AT4G12920(UND), AT5G35770(SAP)	BP	GO:0048229
male gamete generation	2	0	AT3G50310(MAPKKK20), AT5G55020(ATMYB120)	-	BP	GO:0048232
pollen development	2	2	AT3G50310(MAPKKK20), AT5G55020(ATMYB120)	AT3G18000(NMT1), AT4G12920(UND)	BP	GO:0009555
gamete generation	2	0	AT3G50310(MAPKKK20), AT5G55020(ATMYB120)	-	BP	GO:0007276
megasporogenesis	0	1	-	AT5G35770(SAP)	BP	GO:0009554
sexual sporulation	0	1	-	AT5G35770(SAP)	BP	GO:0034293
plant-type sporogenesis	0	1	-	AT5G35770(SAP)	BP	GO:0048236
sporulation	0	1	-	AT5G35770(SAP)	BP	GO:0043934
regulation of reproductive process	4	0	AT5G06170(SUC9), AT5G55020(ATMYB120), AT5G57520(ZFP2), AT5G65080(MAF5)	-	BP	GO:2000241
sexual reproduction	2	1	AT3G50310(MAPKKK20), AT5G55020(ATMYB120)	AT5G35770(SAP)	BP	GO:0019953
regulation of post-embryonic development	3	1	AT5G06170(SUC9), AT5G57520(ZFP2), AT5G65080(MAF5)	AT4G34550	BP	GO:0048580
negative regulation of post-embryonic development	2	0	AT5G57520(ZFP2), AT5G65080(MAF5)	-	BP	GO:0048581
post-embryonic plant organ development	0	2	-	AT2G30340(LBD13), AT3G18000(NMT1)	BP	GO:0090696
post-embryonic development	3	4	AT5G06170(SUC9), AT5G57520(ZFP2), AT5G65080(MAF5)	AT2G30340(LBD13), AT3G18000(NMT1), AT4G34550, AT5G35770(SAP)	BP	GO:0009791
pollination	1	1	AT5G55020(ATMYB120)	AT3G18000(NMT1)	BP	GO:0009856
pollen tube growth	1	1	AT5G55020(ATMYB120)	AT3G18000(NMT1)	BP	GO:0009860
regulation of pollen tube growth	1	0	AT5G55020(ATMYB120)	-	BP	GO:0080092
pollen tube development	1	1	AT5G55020(ATMYB120)	AT3G18000(NMT1)	BP	GO:0048868
pollen tube guidance	0	1	-	AT3G18000(NMT1)	BP	GO:0010183
pollen tube	2	0	AT5G44610(PCAP2), AT5G55020(ATMYB120)	-	CC	GO:0090406
embryo sac development	0	1	-	AT5G35770(SAP)	BP	GO:0009553
plant-type cell wall biogenesis	1	0	AT5G57550(XTH25)	-	BP	GO:0009832

cell wall organization	3	0	AT5G39300(EXPA25), AT5G57550(XTH25), AT5G63560(FACT)	-	BP	GO:0071555
cell wall biogenesis	1	0	AT5G57550(XTH25)	-	BP	GO:0042546
cell wall	5	1	AT3G32980(PER32), AT5G39300(EXPA25), AT5G57550(XTH25), AT5G64110(PER70), AT5G64120(PER71)	AT2G38380(PER22)	CC	GO:0005618
plant-type cell wall	2	1	AT5G64110(PER70), AT5G64120(PER71)	AT2G38380(PER22)	CC	GO:0009505
beta-glucoside transport	1	0	AT5G06170(SUC9)	-	BP	GO:0015759
glycoside transport	1	0	AT5G06170(SUC9)	-	BP	GO:1901656
glycosyl compound biosynthetic process	0	2	-	AT1G65860(FMOGS-OX1), AT3G19710(BCAT4)	BP	GO:1901659
glycosyl compound metabolic process	0	3	-	AT1G65860(FMOGS-OX1), AT3G19710(BCAT4), AT5G51990(DREB1D)	BP	GO:1901657
regulation of polysaccharide metabolic process	0	1	-	AT3G30720(QQS)	BP	GO:0032881
glucan biosynthetic process	0	1	-	AT3G30720(QQS)	BP	GO:0009250
cell wall polysaccharide metabolic process	1	0	AT5G57550(XTH25)	-	BP	GO:0010383
cell wall macromolecule metabolic process	1	0	AT5G57550(XTH25)	-	BP	GO:0044036
cellular polysaccharide biosynthetic process	0	1	-	AT3G30720(QQS)	BP	GO:0033692
polysaccharide metabolic process	1	1	AT5G57550(XTH25)	AT3G30720(QQS)	BP	GO:0005976
polysaccharide biosynthetic process	0	1	-	AT3G30720(QQS)	BP	GO:0000271
hemicellulose metabolic process	1	0	AT5G57550(XTH25)	-	BP	GO:0010410
glucoside transmembrane transporter activity	1	0	AT5G06170(SUC9)	-	MF	GO:0042947
sugar transmembrane transporter activity	1	0	AT5G06170(SUC9)	-	MF	GO:0051119