

An Updated Overview on the Regulation of Seed Germination

Table S1. Selected recent reviews on seed germination-related aspects.

| Subject (Keywords) | References |
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| Generalists | |
| ABA, Arabidopsis, dormancy, germination, GA, seed maturation. | [3] |
| GAs and ABA | |
| GAs, ABA, hormone signaling, seed germination, abiotic stresses, crosstalk of hormone signaling. | [10] |
| DELLAs, GAs, hormone crosstalk, phenotypic plasticity, plant development. | [20] |
| DELLA, GRAS, GAs, Arabidopsis, rice, GID1, crosstalk, | [22] |
| ABA, ABA synthesis, ABA signaling, ABA response. | [35] |
| PYR1, RCAR, ABA transduction, SnRK2, PP2C. | [42] |
| ABI5, abiotic stress response, phytohormone crosstalk, ABA, brassinosteroids, GAs, jasmonates, posttranslational modification. | [81] |
| Hormones transport | |
| GA biosynthesis, GA action, GA transport, evolution, <i>Gibberella fujikuroi</i> . | [48] |
| GA, plant hormone, hormone transport and localization, GA transporters, NPF, SWEET. | [49] |
| ABA; guard cell; transporter; water stress. | [50] |
| GA metabolism, GA transport, GA gradients, cellular growth. | [51] |
| Plant NRT1/PTR transporters, phylogenetic relationships, substrates. | [72] |
| Glucosinolate, hormone, nitrate, nitrite, peptide, transporter. | [73] |
| NIN-like protein (NLP), nitrate, nitrate-responsive gene expression, post-translational regulation, transcription factor, nitrate signalling. | [77] |
| Light regulation | |
| PIF signaling, Phytochromes, plant development. | [109] |
| Chromatin dynamics | |
| Shoot apical meristem, quiescent center, floral homeotic gene, polycomb repression, seed development, dormancy, germination and greening. | [162] |
| DNA methylation, genomic imprinting, Polycomb group proteins, plants. | [309] |
| Small RNAs | |
| Seed germination, seed, small RNA, miRNA, stress response, seed dormancy. | [189] |
| microRNA, siRNA, Arabidopsis. | [202] |
| Posttranslational modifications | |
| ABA, ABA signaling, post-translational regulation, phosphorylation, dephosphorylation, ubiquitination, 26S proteasome system. | [232] |
| Dormancy | |
| Environmental cueing, extinction, germination, physiological dormancy, speciation. | [2] |
| Seed dormancy, germination, ABA, GAs, phytohormone crosstalk. | [239] |
| ABA, dormancy, germination, GAs, plant hormones, preharvest sprouting, seed, cereals. | [240] |
| Cereal grain, cereals, pre-harvest sprouting, seed dormancy, seed germination. | [241] |
| Crop seed dormancy, germination, phytohormones, pre-harvest sprouting. | [242] |
| Dormancy, germination, endosperm weakening, DOG1, ABA signaling. | [260] |

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| Environment, FLC, flowering time, maternal, seed coat, seed development, seed dormancy, seed germination, tannin, temperature. | [308] |
| Pre-dispersal, post-dispersal, predation, seed ageing, seed decay, seed defence, seed dispersal, seed dormancy, seed longevity, seed persistence. | [355] |
| Annual life cycle, Arabidopsis, DOG1, dormancy cycling, germination, nitrate signalling, PHYA, seed dormancy. | [356] |
| Other hormones and ROS | |
| NO, ABA, dormancy, germination, seed, vigor. | [138] |
| NO, dormancy, germination, hypocotyl elongation, reactive nitrogen species, root development, seeds. | [139] |
| Carbon monoxide (CO), abiotic stress, growth and development, antioxidant defense, physiological role, signaling transduction. | [177] |
| Ethylene, ABA; dormancy; GAs; ROS; seed germination. | [285] |
| Karrikins, germination, smoke, signaling, strigolactone. | [292] |
| ROS, Abiotic stress response, molecular regulators, phytohormones, PCD, seed germination. | [315] |
| ROS, seed physiology, germination, seed dormancy, signalling, embryogenesis, PCD. | [337] |
| ROS, dormancy, germination, hydrogen peroxide, phytohormone, priming, seed, signaling molecule. | [338] |
| ROS, aging seeds, antioxidant system, DNA damage, methylation. | [341] |
| AR and longevity | |
| Glassy state, seed, longevity, viscosity, desiccation tolerance, non-reducing sugars, LEA proteins, stability, dry state, molecular mobility, molecular density, hydrogen-bonding. | [312] |
| Desiccation tolerance, ABA, chlorophyll, longevity, LEA proteins, raffinose family oligosaccharides. | [313] |
| AR, dormancy, hormones, seed storage, oxidative reactions, seed bank, early imbibition. | [316] |
| AR, ABA, Arabidopsis, dormancy, endosperm, germination, seed. | [317] |
| Seed germination, dormancy, longevity, seed development, RNA-binding proteins, α -amanitin, proteome, translatoe. | [324] |
| Desiccation tolerance, proteome, seed developments seed germination, seed vigor. | [336] |
| DNA repair, seeds, germination, priming, aging. | [344] |
| Anhydrobiosis, desiccation, dormancy, hormone, longevity, oxidation. | [348] |
| Biomechanics | |
| Endosperm, embryo, germination, seed, ABA, GAs. | [362] |
| Angiosperms, apoplastic ROS, biological materials, seed coat, seed development, embryo growth potential, endosperm weakening, germination, puncture force, seed biomechanics. | [364] |

Table S2. List of complete gene names in alphabetical order according to their acronyms.

| Abbreviation/ Gene Name | Complete Name | Gene Type |
|----------------------------|---|--|
| <i>ABA2</i> | <i>ABSCISIC ACID DEFICIENT 2</i> | Abscisic acid biosynthetic enzyme |
| <i>ABCG</i> | <i>ATP BINDING CASSETTE (ABC) G</i> | G subfamily of ABC transporter |
| <i>ABF/AREB</i> | <i>ABSCISIC ACID-RESPONSIVE ELEMENT (ABRE)-BINDING FACTOR</i> | Basic leucine zipper (bZIP) TF |
| <i>ABI3</i> | <i>ABSCISIC ACID INSENSITIVE 3</i> | B3 domain-containing TF |
| <i>ABI4</i> | <i>ABSCISIC ACID INSENSITIVE 4</i> | APETALA2/Ethylene Responsive Factor (AP2/ERF) TF |

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| <i>ABI5</i> | <i>ABSCISIC ACID INSENSITIVE 5</i> | Basic leucine zipper (bZIP) TF |
| <i>ACO</i> | <i>1-AMINOCYCLOPROPANE-1-CARBOXYLIC ACID (ACC) OXIDASE</i> | Ethylene biosynthetic enzyme |
| <i>AGL</i> | <i>AGAMOUS-LIKE</i> | MCM1/Agamous/Deficiens/SRF (MADS)-box TF |
| <i>AHG1</i> | <i>ABA HYPERSENSITIVE GERMINATION 1</i> | Protein phosphatase 2C (PP2C) |
| <i>AHG3</i> | <i>ABA HYPERSENSITIVE GERMINATION 3</i> | Protein phosphatase 2C (PP2C) |
| <i>AHT1</i> | <i>ABA-HYPERSENSITIVE BTB/POZ PROTEIN1</i> | Broad-complex, Tramtrack, and Bric-à-brac/poxvirus and zinc finger (BTB/POZ)-domain-containing protein |
| <i>AL</i> | <i>ALFIN1-LIKE PROTEIN</i> | Plant homeodomain (PHD) finger protein |
| <i>ALE1</i> | <i>ABNORMAL LEAF-SHAPE 1</i> | PA domain-containing subtilase |
| <i>ALN</i> | <i>ALLANTOINASE</i> | Allantoin degradation and assimilation enzyme |
| <i>AOS</i> | <i>ALLENE OXIDE SYNTHASE</i> | JA biosynthetic enzyme |
| <i>ARF</i> | <i>AUXIN RESPONSE FACTOR</i> | ARF TF |
| <i>ARR</i> | <i>ARABIDOPSIS RESPONSE REGULATOR</i> | ARR TF |
| <i>ATHB</i> | <i>ARABIDOPSIS THALIANA HOMEODOMAIN</i> | Homeodomain-Leucine zipper (HD-Zip) TF |
| <i>ATM</i> | <i>ATAXIA TELANGIECTASIA MUTATED</i> | Phosphatidylinositol 3 kinase-like (PI3K) protein kinase |
| <i>ATML1</i> | <i>ARABIDOPSIS THALIANA MERISTEM LAYER 1</i> | Homeodomain-Leucine zipper (HD-Zip) TF |
| <i>ATR</i> | <i>ATM AND RAD3-RELATED</i> | Phosphatidylinositol 3 kinase-like (PI3K) protein kinase |
| <i>ATS2</i> | <i>ACYLTRANSFERASE 2</i> | Lysophosphatidic acid acyltransferase |
| <i>ATXR7</i> | <i>ARABIDOPSIS TRITHORAX-RELATED 7</i> | Histone-lysine N-methyltransferase |
| <i>AUX1</i> | <i>AUXIN TRANSPORTER PROTEIN 1</i> | Auxin influx carrier protein |
| <i>BBX21</i> | <i>B-BOX (BBX) CONTAINING ZINC-FINGER 21</i> | B-box zinc finger TF |
| <i>BDG1</i> | <i>BODYGUARD1</i> | Cutin biosynthetic hydrolase |
| <i>BES1</i> | <i>BR INSENSITIVE 1 (BRI1)-EMS-SUPPRESSOR 1</i> | Basic helix-loop-helix (bHLH) TF |
| <i>BIN2</i> | <i>BRASSINOSTEROID INSENSITIVE2</i> | Glycogen Synthase Kinase 3-like kinase |
| <i>BRM</i> | <i>BRAHMA</i> | SWITCH2/Sucrose non-fermentable2 (SWI2/SNF2) chromatin-remodeling ATPase |
| <i>BZR1</i> | <i>BRASSINAZOLE RESISTANT 1</i> | Basic helix-loop-helix (bHLH) TF |
| <i>CDF4/DOF2.3</i> | <i>CYCLIC DOF FACTOR 4/DNA-BINDING WITH ONE FINGER 2.3</i> | DNA-binding with one finger (DOF) TF |
| <i>CHD3</i> | <i>CHROMODOMAIN HELICASE-DNA BINDING 3</i> | ATP-dependent Chromodomain Helicase-DNA binding3 (CHD3) type chromatin-remodeling factor of the SWITCH/Sucrose nonfermentable (SWI/SNF) family |
| <i>CHO1</i> | <i>CHOTTO1</i> | Double APETALA2 (AP2) repeat TF |
| <i>CHR</i> | <i>CHROMATIN-REMODELING</i> | SWITCH2/Sucrose non-fermentable2 (SWI2/SNF2) ATPase |
| <i>COG1/DOF1.5</i> | <i>COGWHEEL1/DNA-BINDING WITH ONE FINGER 1.5</i> | DNA-binding with one finger (DOF) TF |
| <i>COP1</i> | <i>CONSTITUTIVE PHOTOMORPHOGENIC 1</i> | E3 ubiquitin ligase |
| <i>COP10</i> | <i>CONSTITUTIVE PHOTOMORPHOGENIC 10</i> | Ubiquitin-conjugating enzyme variant (UEV) |

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| <i>CRA1/CRU1</i> | <i>CRUCIFERINA</i> | 12S seed storage protein |
| <i>CRL3</i> | <i>CULLIN-RING E3 LIGASE3</i> | E3 ubiquitin ligase |
| <i>CRU3</i> | <i>CRUCIFERIN3</i> | 12S seed storage protein |
| <i>CTG10</i> | <i>COLD TEMPERATURE GERMINATING 10</i> | KELCH F-Box protein |
| <i>CTS</i> | <i>COMATOSE</i> | Peroxisomal ATP-binding cassette transporter |
| <i>CUL4</i> | <i>CULLIN 4</i> | E3 ubiquitin ligase component |
| <i>CYP</i> | <i>CYTOCHROME P450</i> | Enzymes (CYP707As are monooxygenases, ABA catabolic enzymes) |
| <i>D14</i> | <i>DWARF14</i> | Strigolactone receptor |
| <i>DAG1</i> | <i>DOF-AFFECTING GERMINATION 1</i> | DNA-binding with one finger (DOF) TF |
| <i>DCP5</i> | <i>DECAPPING 5</i> | Decapping complex component |
| <i>DDB1</i> | <i>DET1-DAMAGED DNA BINDING PROTEIN 1</i> | COP10, DDB1, DET1 (CDD) complex component (regulates the activity of ubiquitin conjugating enzymes) |
| <i>DET1</i> | <i>DE-ETIOLATED 1</i> | COP10, DDB1, DET1 (CDD) complex component (regulates the activity of ubiquitin conjugating enzymes) |
| <i>DOG1</i> | <i>DELAY OF GERMINATION 1</i> | DELAY OF GERMINATION (DOG)-family protein |
| <i>EBS</i> | <i>EARLY BOLTING IN SHORT DAY</i> | Bromo-adjacent homology (BAH)-plant homeodomain (PHD)-containing protein |
| <i>EFS</i> | <i>EARLY FLOWERING IN SHORT DAYS</i> | Histone-lysine N-methyltransferase |
| <i>EMF2</i> | <i>EMBRYONIC FLOWER 2</i> | Polycomb group (PcG) protein |
| <i>ERF</i> | <i>ETHYLENE RESPONSE FACTORS</i> | APETALA2/Ethylene Responsive Factor (AP2/ERF) TFs |
| <i>ETR1/RDO3</i> | <i>ETHYLENE RESPONSE 1/ REDUCED DORMANCY 3</i> | Ethylene receptor |
| <i>EXP8</i> | <i>EXPANSIN-A8</i> | Alpha-Expansin protein |
| <i>EXPA</i> | <i>EXPANSIN</i> | Alpha-Expansin proteins |
| <i>FLC</i> | <i>FLOWERING LOCUS C</i> | MCM1/Agamous/Deficiens/SRF MADS-box protein |
| <i>FT</i> | <i>FLOWERING LOCUS T</i> | Phosphatidylethanolamine-binding protein |
| <i>FUS3</i> | <i>FUSCA3</i> | B3 domain-containing TF |
| <i>F_yPP</i> | <i>PHYTOCHROME-ASSOCIATED SERINE/THREONINE PROTEIN PHOSPHATASE</i> | Type 6 serine/threonine protein phosphatase (PP6) phosphatase |
| <i>GA20ox</i> | <i>GA 20-OXIDASES</i> | GA biosynthetic enzyme |
| <i>GA2ox</i> | <i>GA 2-OXIDASES</i> | GA catabolic enzyme |
| <i>GA3ox</i> | <i>GA 3-OXIDASES</i> | GA biosynthetic enzyme |
| <i>GAI</i> | <i>GIBBERELIC ACID INSENSITIVE</i> | DELLA protein |
| <i>GARU</i> | <i>GA RECEPTOR RING E3 UBIQUITIN LIGASE</i> | E3 ubiquitin ligase |
| <i>GASA6</i> | <i>GIBBERELIC ACID-STIMULATED ARABIDOPSIS 6</i> | GASA peptide |
| <i>GATA12</i> | <i>GATA TRANSCRIPTION FACTOR 12</i> | GATA-type zinc finger TF |
| <i>GID1</i> | <i>GIBBERELIN INSENSITIVE DWARF 1</i> | GA receptor |
| <i>GID2</i> | <i>GIBBERELIN INSENSITIVE DWARF 2</i> | F-box factor |
| <i>GSO</i> | <i>GASSHO</i> | Leucine-rich repeat transmembrane-type receptor kinase |
| <i>HD2B</i> | <i>HISTONE DEACETYLASE2B</i> | Histone deacetylase |
| <i>HDA</i> | <i>HISTONE DEACETYLASE</i> | Histone deacetylase |
| <i>HDAC</i> | <i>HISTONE DEACETYLASE</i> | Histone deacetylase |
| <i>HFR1</i> | <i>LONG HYPOCOTYL IN FAR-RED 1</i> | Basic helix-loop-helix (bHLH) TF |

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| <i>HSI2</i> | <i>HIGH-LEVEL EXPRESSION OF SUGAR-INDUCIBLE GENE 2</i> | B3 domain-containing TF |
| <i>HUB1/RDO4</i> | <i>HISTONE MONOUBIQUITINATION 1/REDUCED DORMANCY 4</i> | E3 ubiquitin ligase |
| <i>HUB2</i> | <i>HISTONE MONO-UBIQUITINATION 2</i> | E3 ubiquitin ligase |
| <i>HY1</i> | <i>HEME OXYGENASE 1</i> | Phytochrome chromophore biosynthetic enzyme |
| <i>HY5</i> | <i>LONG HYPOCOTYL 5</i> | Basic leucine zipper (bZIP) TF |
| <i>HYH/bZIP64</i> | <i>HY5-LIKE</i> | Basic leucine zipper (bZIP) TF |
| <i>ICE1</i> | <i>INDUCER OF CBF EXPRESSION 1</i> | Basic helix-loop-helix (bHLH) TF |
| <i>JAR1</i> | <i>JASMONATE RESISTANT 1</i> | Jasmonoyl-L-amino acid synthetase |
| <i>JAZ1</i> | <i>JASMONATE-ZIM-DOMAIN PROTEIN 1</i> | JA signaling repressor |
| <i>JMJ</i> | <i>JUMONJI</i> | Histone demethylase |
| <i>KAI2/HTL</i> | <i>KARRIKIN INSENSITIVE2 (KAI2)/HYPOSENSITIVE TO LIGHT (HTL)</i> | α/β -fold hydrolase; karrikin receptor |
| <i>KEG</i> | <i>KEEP ON GOING</i> | E3 ligase |
| <i>KRS</i> | <i>KERBEROS</i> | Endosperm-specific cysteine-rich peptide |
| <i>LACS2</i> | <i>LONG-CHAIN ACYL-COA SYNTHETASE 2</i> | Fatty acid metabolic enzyme |
| <i>LDL</i> | <i>LYSINESPECIFIC DEMETHYLASE-LIKE</i> | Histone demethylase |
| <i>LEC1</i> | <i>LEAFY COTYLEDON 1</i> | Subunit of the nuclear transcription factor Y (NF-Y) CCAAT-binding TF |
| <i>LEC2</i> | <i>LEAFY COTYLEDON 2</i> | B3 domain-containing TF |
| <i>LSM1</i> | <i>SM-LIKE 1</i> | Component of the decapping machinery |
| <i>LUH</i> | <i>LEUNIG_HOMOLOG</i> | Groucho family co-repressor |
| <i>MAP3K</i> | <i>MITOGEN-ACTIVATED PROTEIN KINASE KINASE KINASE</i> | Mitogen-activated protein kinase |
| <i>MAX2</i> | <i>MORE AXILLARY GROWTH 2</i> | F-box protein |
| <i>MFT</i> | <i>MOTHER-OF-FT</i> | Phosphatidylethanolamine-binding protein |
| <i>MPK/MAPK</i> | <i>MITOGEN-ACTIVATED PROTEIN KINASE</i> | Mitogen-activated protein (MAP) kinase |
| <i>MYB</i> | <i>MYELOBLASTOSIS</i> | MYB TF |
| <i>NAC</i> | <i>NAM, ATAF1/2, AND CUC2</i> | NAC TF |
| <i>NCED</i> | <i>9-CIS-EPOXYCAROTENOID DIOXYGENASES</i> | ABA biosynthetic enzymes |
| <i>NF-YC</i> | <i>NUCLEAR FACTOR-Y C</i> | CCAAT-binding TF |
| <i>NIA/NR</i> | <i>NITRATE REDUCTASE</i> | Enzyme; asimilation of nitrate into ammonia |
| <i>NIR1</i> | <i>NITRITE REDUCTASE</i> | Enzyme; asimilation of nitrate into ammonia |
| <i>NLP</i> | <i>NIN-LIKE PROTEIN</i> | Nitrate response NLP family TF |
| <i>NPF</i> | <i>NITRATE TRANSPORTER1 (NRT1)/PEPTIDE TRANSPORTER (PTR)</i> | Hormone, peptide and nitrate transporter family |
| <i>NPF4.6/AIT1/NRT1.2</i> | <i>NITRATE TRANSPORTER1 (NRT1)/PEPTIDE TRANSPORTER (PTR) (NPF) 4.6/ABA-IMPORTING TRANSPORTER (AIT) 1/NITRATE TRANSPORTER (NRT) 1.2</i> | ABA and nitrate NPF transporter |
| <i>NRE</i> | <i>NITRATE RESPONSE CIS-ELEMENT</i> | NLP binding sequence |
| <i>NRPD1</i> | <i>NUCLEAR RNA POLYMERASE D1</i> | RNA polymerase that mediates 24-nt short-interfering RNAs (siRNA) accumulation |
| <i>PAF1C</i> | <i>RNA POLYMERASE II-ASSOCIATED FACTOR 1 COMPLEX</i> | Pol II-associated platform that recruits factors required for Pol II progression (mammals) |
| <i>PDF2</i> | <i>PROTODERMAL FACTOR 2</i> | Homeodomain (HD-ZIP) TF |

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| <i>PER1</i> | <i>1-CYSTEINE PEROXIREDOXIN 1</i> | Peroxiredoxin family of antioxidants |
| <i>PIF1/PIL5</i> | <i>PHYTOCHROME INTERACTING FACTOR 1/PHYTOCHROME-INTERACTING FACTOR 3-LIKE 5</i> | Basic helix-loop-helix (bHLH) TF |
| <i>PIF6/PIL2</i> | <i>PHYTOCHROME-INTERACTING FACTOR 6/PHYTOCHROME INTERACTING FACTOR 3-LIKE 2</i> | Basic helix-loop-helix (bHLH) TF |
| <i>PIF8/UNE10</i> | <i>PHYTOCHROME-INTERACTING FACTOR 8/UNFERTILIZED EMBRYO SAC 10</i> | Basic helix-loop-helix (bHLH) TF |
| <i>PKL</i> | <i>PICKLE</i> | ATP-dependent Chromodomain Helicase-DNA binding3 (CHD3) type chromatin-remodeling factor of the SWITCH/sucrose nonfermentable (SWI/SNF) family |
| <i>PP1</i> | <i>TYPE 1 SERINE/THREONINE PROTEIN PHOSPHATASE</i> | PPP (phosphoprotein phosphatase) family phosphatase |
| <i>PP2A</i> | <i>TYPE 2A SERINE/THREONINE PROTEIN PHOSPHATASE</i> | PPP (phosphoprotein phosphatase) family phosphatase |
| <i>PP2C</i> | <i>TYPE 2C SERINE/THREONINE PROTEIN PHOSPHATASE</i> | PPP (phosphoprotein phosphatase) family phosphatase |
| <i>PP6</i> | <i>TYPE 6 SERINE/THREONINE PROTEIN PHOSPHATASE</i> | PPP (phosphoprotein phosphatase) family phosphatase |
| <i>PRC1</i> | <i>POLYCOMB REPRESSOR COMPLEX 1</i> | Complex that catalyzes H2AK119ub |
| <i>PRC2</i> | <i>POLYCOMB REPRESSOR COMPLEX 2</i> | Complex that catalyzes H3K27me3 |
| <i>PWR</i> | <i>POWERDRESS</i> | SANT (Swi3, Ada2, N-Cor, TFIIB) domain-containing protein |
| <i>PYR/PYL/RCAR</i> | <i>PYRABACTIN RESISTANCE 1/PYRABACTIN RESISTANCE 1-LIKE/REGULATORY COMPONENT OF ABA RECEPTOR</i> | ABA receptor |
| <i>RAF</i> | <i>RAPIDLY ACCELERATED FIBROSARCOMA (RAF)-LIKE KINASE</i> | Mitogen-activated protein kinase kinase kinase (MAP3K) |
| <i>RAV1</i> | <i>RELATED TO ABI3/VP1 1</i> | APETALA2/Ethylene Responsive Factor (AP2/ERF) and B3 domain-containing TF |
| <i>RDO5/DOG18/IBO</i> | <i>REDUCED DORMANCY 5/DELAY OF GERMINATION 18/IBRAHIM BEKIROVIĆ</i> | Type 2C serine/threonine protein phosphatase |
| <i>RGA</i> | <i>REPRESSOR OF GA1-3</i> | DELLA protein |
| <i>RGL2</i> | <i>RGA-LIKE2</i> | DELLA protein |
| <i>RRP41L/SLG</i> | <i>RIBOSOMAL RNA-PROCESSING PROTEIN 41-LIKE/SLOWER GROWTH</i> | RNase phosphorolytic (PH) domain-type protein; putative core subunit of the exosome |
| <i>RSL1</i> | <i>RING FINGER OF SEED LONGEVITY1</i> | E3 ubiquitin ligase |
| <i>RSM1</i> | <i>RADIALIS-LIKE SANT/MYB 1</i> | Myeloblastosis (MYB) TF |
| <i>RVE</i> | <i>REVEILLE</i> | Myeloblastosis (MYB)-like TF |
| <i>SAG</i> | <i>SENSITIVE TO ABA DURING GERMINATION</i> | Midasin homologue 1 (MDN1) domain-containing protein |
| <i>SCF</i> | <i>SKP1-CULLIN1-F-BOX</i> | Subclass of E3 ubiquitin ligase |
| <i>SCL</i> | <i>SCARECROW-LIKE</i> | GRAS TF |
| <i>SDG8</i> | <i>SET DOMAIN GROUP 8</i> | Histone methyltransferase |
| <i>SDR4L</i> | <i>SEED DORMANCY 4-LIKE</i> | Sdr4 family protein |
| <i>SEC</i> | <i>SECRET AGENT</i> | O-linked N-acetylglucosamine transferase |
| <i>SIZ1</i> | <i>SAP AND MIZ-FINGER DOMAIN-CONTAINING PROTEIN 1</i> | SUMO E3 ligase |
| <i>SLY1</i> | <i>SLEEPY1</i> | F-box protein |

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| <i>SMAX1</i> | <i>SUPPRESSOR OF MAX2-1</i> | Heat-shock-related protein; karrikin signaling |
| <i>SMR5</i> | <i>SIAMESE-RELATED 5</i> | Cell cycle inhibitor |
| <i>SNE/SLY2</i> | <i>SNEEZY/SLEEPY2</i> | F-box protein |
| <i>SNL</i> | <i>SWITCH (SWI)-INDEPENDENT 3 (SIN3)-LIKE</i> | Histone deacetylase-binding factor |
| <i>SnRK2</i> | <i>SUCROSE NONFERMENTING-1 (SNF1)-RELATED PROTEIN KINASE</i> | Sucrose nonfermenting-1/ AMP-activated Protein Kinases (SNF1/AMPK) serine/threonine kinases |
| <i>SOM</i> | <i>SOMNUS</i> | C3H-type zinc finger TF |
| <i>SPA1</i> | <i>SUPPRESSOR OF PHYA-105 1</i> | Component of the COP1/SPA E3 ubiquitin-protein ligase |
| <i>SPT</i> | <i>SPATULA</i> | Basic helix-loop-helix (bHLH) TF |
| <i>SPY</i> | <i>SPINDLY</i> | O-fucosyltransferase |
| <i>SUVH5/SET9</i> | <i>SUPPRESSOR OF VARIATION 3-9 HOMOLOG PROTEIN 5/SET DOMAIN GROUP 9</i> | Histone-lysine N-methyltransferase |
| <i>SWEET</i> | <i>SUGARS WILL EVENTUALLY BE EXPORTED TRANSPORTERS</i> | Sugar and GA transporter |
| <i>SWI2/SNF2</i> | <i>SWITCH2/SUCROSE NON-FERMENTABLE 2</i> | ATP-dependent chromatin-remodeling family |
| <i>TAGK2/CRK2</i> | <i>CALCIUM-DEPENDENT PROTEIN KINASE (CDPK/CPK)-RELATED PROTEIN KINASE 2</i> | Tyrosine kinase |
| <i>TAP46</i> | <i>2A PHOSPHATASE-ASSOCIATED PROTEIN OF 46 KDA</i> | Protein phosphatase2A (PP2A)-associated protein |
| <i>TFIIS/RDO2</i> | <i>TRANSCRIPTION ELONGATION FACTOR TFIIS/REDUCED DORMANCY 2</i> | Transcription elongation factor |
| α - <i>TIP</i> | <i>ALPHA-TONOPLAST INTRINSIC PROTEIN</i> | Aquaporin water channel |
| <i>TOPP4</i> | <i>TYPE ONE PROTEIN PHOSPHATASE 4</i> | Serine/threonine protein phosphatase |
| <i>TPL</i> | <i>TOPESS</i> | Groucho family co-repressor |
| <i>TT10/LAC15</i> | <i>TRANSPARENT TESTA 10/LACCASE-15</i> | Laccase-like enzyme |
| <i>TWS1</i> | <i>TWISTED SEED 1</i> | Small protein |
| <i>VCS</i> | <i>VARICOSE</i> | Decapping complex component |
| δ - <i>VPE</i> | <i>DELTA VACUOLAR PROCESSING ENZYME</i> | Caspase-1-like vacuolar processing enzyme |
| <i>VQ</i> | <i>FXXXVQXXTG (VQ) MOTIF-CONTAINING PROTEIN</i> | VQ family protein |
| <i>WRKY</i> | <i>WRKY DNA-BINDING PROTEIN</i> | WRKY TF |
| <i>XRN4/AIN1/EIN5</i> | <i>EXORIBONUCLEASE 4/ACC INSENSITIVE 1/ETHYLENE INSENSITIVE 5</i> | 5'-3' exoribonuclease |
| <i>XTH31</i> | <i>XYLOGLUCAN ENDOTRANSGLYCOSYLASES/HYDROLASES 31</i> | Xyloglucan endohydrolase and xyloglucan endotransglucosylase |
| <i>XYL1/TRG1</i> | <i>ALPHA-XYLOSIDASE 1/THERMOINHIBITION RESISTANT GERMINATION 1</i> | alpha-l-arabinofuranosidase/beta-d-xylosidase |
| <i>ZOU/RGE1</i> | <i>ZHOUP1/RETARDED GROWTH OF EMBRYO 1</i> | Basic helix-loop-helix (bHLH) TF |
| <i>ZRF</i> | <i>ZUOTIN-RELATED FACTOR</i> | H2Aub1 deubiquitination |