

Gene ID	Gene	Process	References
At1g02930	<i>GSTF7</i> ( <i>ATGSTF6</i> )(**)	Glutathione S-Transferase	Moeder et al. 2007. <i>Plant Mol Biol</i> 63(2):273-287
At1g02940	<i>GSTF5</i> ( <i>ATGSTF5</i> )(**)	Glutathione S-Transferase	Wagner et al., 2002. <i>Plant Mol Biol</i> . 49(5):515-532.
At1g07390	<i>ATRLP1</i>	Signal transduction	Kobe B, Kajava AV.2001. <i>Curr Opin Struct Biol</i> 11(6):725-732.
At1g08590	<i>CLV1</i>	Protein amino acid phosphorylation, signaling pathway	Duarte et al., 2006. <i>Mol. Biol. Evol.</i> 23(2):469-478.
At1g18980	<i>GERMIN</i>	Manganese ion binding	Christensen et al. 2004. <i>Mol Plant Microbe Interact</i> 17(1): 109-117*
At1g32560	<i>LEA1</i>	Embryonic development ending in seed dormancy	Hundertmark and Hincha. 2008. <i>BMC Genomics</i> 9:118.
At1g58025	<i>BD</i>	DNA binding	Chua et al. 2005. <i>Genes Dev</i> 19(18): 2245-2254*
At1g69410	<i>EIF5A</i>	Translational initiation	Balabanov et al. 2007. <i>Blood</i> 109(4):1701-1711*.
At1g74590	<i>GSTU10</i> ( <i>ATGSTU10</i> )(**)	Glutathione S-Transferase	Wagner et al., 2002. <i>Plant Mol Biol</i> . 49(5):515-532.
At2g02300	<i>Fbox</i> ( <i>ATPP2-B5</i> )(**)	Carbohydrate binding	Dinant et al. 2003. <i>Plant Physiol</i> . 131(1):114-128.
At2g04750	<i>Fimbrin</i>	Actin binding	Reichl et al. 2008. <i>Curr Biol</i> 18(7): 471- 480.
At2g23340	<i>AP2</i>	Regulation of transcription	Pre et al. 2008. <i>Plant Physiol</i> , in press.
At2g24740	<i>SUVH8</i> ( <i>SDG21</i> )(**)	Regulation of gene expression, epigenetics	Baumbusch et al., 2001. <i>Nucleic Acids Research</i> 29(21):4319-33
At2g28890	<i>PLL4</i>	Leaf development	Song et al. 2005. <i>Dev Biol</i> . 285(1):272-284.
At2g30520	<i>RPT2</i>	Protein binding, phototropism	Inada et al. 2004. <i>Plant Cell</i> 16(4):887- 896.
At2g33480	<i>ANACO41</i>	Multicellular organismal development	Yoo et al. 2007. <i>PLoS ONE</i> 2(7):e642.
At2g34790	<i>EDA28</i>	Embryonic development ending in seed dormancy, polar nucleus fusion	Pagnussat et al. 2005. <i>Development</i> 132(3):603-614.
At2g43820	<i>UDP</i>	UDP-glucosyltransferase	Sepúlveda-Jiménez et al. 2005. <i>J Exp Bot</i> 56(412):605-611*.
At2g44370	<i>DC1</i>	Protein binding	Shinya et al. 2007. <i>Plant Cell Physiol</i> . 48(10):1404-1413*.
At2g44590	<i>DL1D</i> ( <i>ADL1D</i> )(**)	Growth and development	Kang et al. 2003. <i>Plant Cell</i> . 15(4):899-913.
At2g44990	<i>CCD7</i>	Secondary shoot formation	Stirnberg et al. 2007. <i>Plant J</i> 50(1):80-94.
At2g45660	<i>AGL20</i>	Positive regulation of flowering	Liu et al. 2007. <i>Development</i> 134(10):1901-1910.
At2g46070	<i>MAPK12</i> ( <i>ATMPK12</i> )(**)	Signal transduction	Hamel et al., 2006. <i>Trends Plant Sci</i> .11(4):192-198.
At3g01440	<i>PsbQ</i>	Light reaction	Zybailov et al. 2008. <i>PLoS ONE</i> 3(4):e1994
At3g44260	<i>CCR4</i>	RNA modification	Prévôt et al. 2001. <i>J Biol Chem</i> 276(13): 9640-9648*
At3g47430	<i>PEX11</i>	Peroxisome organization and biogenesis	Orth et al. 2007. <i>Plant Cell</i> 19(1):333-350.
At3g48360	<i>BT2</i>	Positive regulation of telomerase activity	Ren et al. 2007. <i>Plant Cell</i> 19(1): 23-31.
At4g01870	<i>tolB</i>	Translocation domain	Mueller et al. 2008. <i>Plant Cell</i> 20: 768-785*

At4g14540	<i>HAP3</i>	Regulation of transcription	Lee et al. 2003. Proc Natl Acad Sci U S A. 100(4):2152-2156.
At4g16480	<i>ATINT4</i>	Carbohydrate transport	Schneider et al. Plant Physiol 145(4):1395-1407.
At4g21070	<i>BRCT</i> ( <i>ATBRCA1</i> ) (**)	DNA repair	Reidt et al., 2006.EMBO J. 25(18):4326-4337.
At4g21380	<i>ARK3</i>	Protein amino acid phosphorylation	Pastuglia et al. 2002. Gene 282(1-2): 215-225.
At4g28040	<i>MtN21</i>	Amino acid transport	Busov et al. 2004. Planta 218(6):916-927*.
At4g33110	<i>Mtase</i>	N-methyltransferase	Liscombe and Facchini. 2007. J Biol Chem 282(20):14741-14751*.
At4g35770	<i>SEN1</i>	Aging	Schenk et al. 2005. Plant Physiol Biochem 43(10-11): 997-1005.
At4g37490	<i>CYC1</i>	Regulation of cell growth and cell cycle	Kirik et al., 2007. Plant Cell. 19(10):3100-3110.
At5g11210	<i>AGLR2.5</i>	Response to light stimulus	Shin et al. 2008. Neuropharmacology, in press.
At5g24520	<i>TTG1</i>	Cell fate and differentiation	Bouyer et al., 2008. PLoS Biol. 6: e141.
At5g28770	<i>BZO2H3</i>	Regulation of transcription	Jakoby et al. 2002. Trends Plant Sci 7(3):106-111.
At5g47220	<i>ERF2</i>	Positive regulation of transcription	Nakano et al. 2006. Plant Physiol. 140(2):411-432.
At5g49360	<i>BXL1</i>	Secondary wall thickening	Zybailov et al. 2008. PLoS ONE 3(4):e1994.
At5g52640	<i>HSP81</i>	Heat shock	Takahashi et al. 2003. Proc Natl Acad Sci U S A.100(20):11777-11782.
At5g54840	<i>GTP</i>	Small GTPase mediated signal transduction	Weirich et al. 2008. Nat Rev Mol Cell Biol 9(6):478-489*.
At5g65140	<i>trehalose</i>	trehalose biosynthetic process	Chary et al. 2008. Plant Physiol 146(1): 97-107

**Table S3.** List of candidate genes selected for the validation with the bisulfite sequencing analysis. Genes were obtained from both the pharmacological and genetic approaches. Then, we selected candidates attending to their functional role as described in the literature.

\* *member of the same family.*

\*\**nomenclature from genome annotation: Build 7.0.*

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