

Addition File 1

Table S1. List of Salt Stress Supportive genes described in this paper

Gene name	Salt Stress Response	Source	Role in stress response	Reference
Osmotic Stress				
Salt stress related gene in ABA dependent pathway				
<i>OsPSY3/ OsNCED3/ OsNCED4/ OsNCED5</i>	Up-regulated	<i>Oryza sativa</i>	Regulate salt stress tolerance through ABA biosynthesis	Welsch et al. 2008
<i>OsABF2</i>	Down-regulated	<i>Oryza sativa</i>	Gene expressed modulation through an ABA-dependent pathway	Hossain et al. 2010
<i>OsABI5</i>	Up-regulated	<i>Oryza sativa</i>	Transgenic rice plants overexpressing <i>OsABI5</i> showed high sensitivity to salt stress	Zou et al. 2008
<i>OsZIP23</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of expression of genes involved in stress response and tolerance	Xiang et al. 2008
<i>SAPK1/ SAPK2</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of expression of genes involved in stress response and tolerance	Kobayashi et al. 2004
<i>OSRK1</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of expression of genes involved in stress response and tolerance	Kobayashi et al. 2004
<i>SAPK4</i>	Up-regulated	<i>Oryza sativa</i>	Maintain Na ⁺ and Cl ⁻ homeostasis by reducing the <i>NHX</i> and <i>CLCI</i> expression	Diedhiou et al. 2008, Nakamura et al. 2006
<i>OsMYB3R-2</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of stress responsive gene expression	Dai et al. 2007
<i>OsMYB2</i>	5hr (Up-regulated) 24hr (Down-regulated)	<i>Oryza sativa</i>	Overexpression of <i>OsMYB2</i> in rice seedlings functions as positive regulator to salt, cold, and dehydration stress tolerance.	Yang et al. 2012
<i>OsLEA3/OsRab16A/OsDREB2A</i>	Up-regulated	<i>Oryza sativa</i>	<i>OsMYB2</i> downstream genes	Yang et al. 2012
<i>OsNAC6</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of stress responsive gene expression	Nakashima et al. 2007
<i>OsNAC5</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of <i>OsLEA3</i> expression	Takasaki et al. 2010, Song et al. 2011
<i>SNAC1</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing salt stress tolerance	Hu et al. 2006
<i>ZFP252</i>	Up-regulated	<i>Oryza sativa</i>	Accumulation of sugars and proline	Xu et al. 2008
<i>OSISAP1</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing salt stress tolerance	Mukhopadhyay

				et al. 2004
<i>DST</i>	Down-regulated	<i>Oryza sativa</i>	Regulation H ₂ O ₂ -induced stomatal closure and negatively regulation	Huang et al. 2009
<i>ZFP179</i>	Up-regulated	<i>Oryza sativa</i>	Accumulation of sugars and proline	Sun et al. 2010
<i>OsTZF1</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing salt and drought stress tolerance	Jan et al. 2013
<i>OsCPK21</i>	Up-regulated	<i>Oryza sativa</i>	Positive regulate the signaling pathways that are involved in the response to ABA and salt stress tolerance	Asano et al. 2011
<i>OsNAC6/Rab21</i> <i>/OsLEA3</i>	Up-regulated	<i>Oryza sativa</i>	<i>OsCPK21</i> downstream genes	Asano et al. 2011, Duan et al. 2012
<i>OsDCPK7</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing salt stress tolerance	Saijo et al. 2000
<i>Rab16a /Salt /wsi18</i>	Up-regulated	<i>Oryza sativa</i>	<i>OsDCPK7</i> downstream genes	Saijo et al. 2000
<i>OsSIK1.</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing salt stress tolerance	Ouyang et al. 2010
<i>OsDSM1</i>	Up-regulated	<i>Oryza sativa</i>	Early signaling component in regulating responses to osmotic stress by regulating scavenging of ROS	Ning et al. 2010
<i>OsEDR1</i>	Up-regulated	<i>Oryza sativa</i>	An essential positive regulator of tolerance to salt stress.	Kim et al 2003
<i>OsMAPK4/ OsMAPK5</i>	Up-regulated	<i>Oryza sativa</i>	Positively regulate salt stress tolerance,	Fu et al. 2002, Xiong et al. 2003
<i>OsMAPK33/ OsMAPK44</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in salt stress tolerance through unfavorable ion homeostasis	Lee et al. 2011, Jeong et al. 2006
<i>OsMSRMK2/ OsMSRMK3</i>	Up-regulated	<i>Oryza sativa</i>	Play role in salt stress signaling pathway in rice.	Agrawal et al. 2002, 2003
<i>OsmiR396c/ OsmiR393</i>	Up-regulated	<i>Oryza sativa</i>	Overexpression shows sensitive phenotype in salt stress	Gao et al. 2010, 2011
<i>OsWRKY45-2</i>	Up-regulated in after 4 day	<i>Oryza sativa</i>	Positively regulates ABA signaling and negatively regulates rice response to salt stress.	Tao et al. 2011
<i>OsTIFY11a</i>	Up-regulated	<i>Oryza sativa</i>	Regulation seed germination	Ye et al. 2009
<i>OsDhn1</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing salt and drought stress tolerance	Not reported
<i>OsERF922</i>	Down-regulated	<i>Oryza sativa</i>	Negatively regulate the salt stress tolerance	Liu et al. 2012
<i>OsSKIPa</i>	Up-regulated	<i>Oryza sativa</i>	Positively regulate salt and drought stress tolerance	Hou et al. 2009
<i>c-GS2</i>	Up-regulated	<i>Oryza sativa</i>	Accumulation of glutamine leads to salt stress tolerance	Hoshida et al. 2000

<i>otsA + otsB</i>	Up-regulated	<i>Escherichia coli</i>	Positively regulate salt and drought stress tolerance through the accumulation of trehalose	Garg et al. 2002
<i>hva1</i>	Up-regulated	<i>Hordeum vulgare</i>	Accumulation of HVA1 leads to salt and drought stress tolerance	Xu et al. 1996
Salt stress related gene in ABA independent pathway				
<i>OsDREB1A</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of stress-responsive gene expression and accumulation of proline.	Dubouzet et al. 2003
<i>OsDREB1F</i>	Up-regulated	<i>Oryza sativa</i>	ABA-responsive regulation of gene expression	Wang et al. 2008
<i>OsDREB2A</i>	Up-regulated	<i>Oryza sativa</i>	Regulation of salt stress tolerance	Mallikarjuna et al. 2011
<i>OsCPK12</i>	Not regulated at the transcriptional level in response to salt stress	<i>Oryza sativa</i>	An essential positive regulator of tolerance to salt stress.	Asano et al. 2012
<i>Osrboh1 / OsAPx2 / OsAPx8</i>	Regulated by <i>OsCPK12</i>	<i>Oryza sativa</i>	Play important role in H ₂ O ₂ homeostasis	Asano et al. 2012
<i>codA</i>	Up-regulated	<i>Arthrobacter globiformis</i>	Positively regulate salt and cold stress tolerance in rice	Sakamoto et al. 1998
<i>Mn-SOD</i>	Up-regulated	<i>Saccharomyces cerevisiae</i>	Transgenic plants showed enhanced tolerance to salt	Tanaka et al. 1999
<i>katE</i>	Up-regulated	<i>Escherichia coli</i>	It decompose H ₂ O ₂ and increase salt stress tolerance	Motohashi et al. 2010
<i>OsGSK1</i>	Down-regulated	<i>Oryza sativa</i>	Negatively regulate the salt stress tolerance.	Koh et al. 2007
<i>OsNADP-ME2</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing tolerance of plants to salt and osmotic stress	Liu et al. 2007
Genes involved in ionic stress response pathway				
<i>OsSOS1 / OsCIPK24 / OsCBL4</i>	Up-regulated	<i>Oryza sativa</i>	Important in Calcium signaling	Atienza et al. 2007
<i>OsAKT1</i>	Up-regulated	<i>Oryza sativa</i>	Play important role in enhancing salt stress tolerance	Golldack et al. 2003
<i>OsCLC1</i>	Up-regulated	<i>Oryza sativa</i>	Act as proton-chloride antiporters	Nakamura et al. 2006