Table 1. Suppl. Genes that are involved in shoot apical meristem (SAM) regulation during the early stage of embryogenesis in plants. [a] -Relationships of maize and rice genes to known *Arabidopsis thaliana* genes. [b] -Pair of genes that are allelic. [c] -*OSHB1* (AK102378) and *OSHB2* (AK102603) were checked from this family.

Genes	Species	Gene	Relationships[a]	Function	References
KNOX genes	*Arabidopsis*	*STM*		regulates maintenance of SAM	Dodsworth 2009
	maize	*KN1*	homologue of *STM*	regulates maintenance of SAM	Smith *et al*. 1995; Vollbrecht *et al*. 2000
	rice	*OSH1*	orthologue of *KN1*	regulates maintenance of SAM	Sato *et al*. 1996; Itoh *et al*. 2008
	Arabidopsis	*CLV1*		heteromeric receptor complex,	Leibfried *et al*. 2005
		CLV2		suppression of WUS	
		CLV3		activates CLV1, CLV2	
	maize	*TD1*	orthologue of *CLV1*	heteromeric receptor complex,	Pautler *et al*. 2013
		FEA2	orthologue of *CLV2*	suppression of WUS	
	rice	*FON1*	orthologue of *CLV1*	receptor of FON2	Suzaki *et al*. 2008
		FON2	orthologue of *CLV2*		
		FCP1	closely related to *CLV3*	negative regulation of WOX4	
WOX genes	*Arabidopsis*	*WUS*		control of the size of CZ	Haecker *et al.* 2004; Leibfried *et al.* 2005
	maize	*ZmWUS1,*	paralogue of *WUS*	transcriptional activity in coleoptile stage	Nardmann and Werr 2006
		ZmWUS2	paralogue of *WUS*	expression in PZ and P1	
	rice	*OsWUS*	orthologue of *WUS*	control of the size of CZ	Nardmann and Werr 2006; Ohmori *et al.* 2013
Specific and independent of meristem regulators	*Arabidopsis*	*CUC1*		encode NAC-domain proteins	Spinelli *et al*. 2011
		CUC2			
		miR394		mobile signal that confers stem cell competence	Knauer *et al*. 2013
	rice	*SHO1*	orthologue of DICER-like 4	encode homologues of RNA-dependent RNA polymerase	Nagasaki *et al*. 2007
		SHL1, SHL2	orthologue of RNA-dep RNA poly 6		
		SHL4/SHO2[b]	orthologue of AGO7		
		HD-ZIPIII[c]	class III homeodomain leucine zipper gene family	downstream of *SHL* and *SHO*	Nagasaki *et al*. 2007; Itoh *et al*. 2008
Other genes that lead to embryo lethality	*Arabidopsis*	*AtFH*		regulator of Fe metabolism and trafficking in mitochondria	Vazzola *et al*. 2007
		HPA1/HISN6A[b]	paralogues of *HPA*	biosynthetic pathway leading to histidine (His)	Bikard *et al*. 2009
		HPA2/HISN6B[b]			
		AtDEK1		calpain-like cysteine protease	Johnson *et al*. 2005; Takada and Iida 2014
	maize	*sml*	not identified	connected with *KN1* expression	Pilu *et al*. 2002
		dek1	homologue of *AtDEK1*	phytocalpain synthesis	Becraft *et al*. 2002
	rice	*ADL1*	orthologue of maize *dek1*	phytocalpain synthesis	Hibara *et al*. 2009
		ONI1	orthologue of Zm*FAE2*	encodes fatty acid elongase (VLCFA)	Ito *et al.* 2011

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