

Supplementary Materials

Table. S1 Primers used for RT-qPCR analysis in this study

Gene	Specific Primer
<i>SiDML5</i>	F:5'- GGATGAGTGGGAACCCATAAA - 3' R:5'- GCTGAAGGGCAAAGGTTATTG -3'
<i>SiDML4</i>	F:5'- AGGCTATGGGTTGGGTCCT -3' R:5'- CCTTCTCCCTGGTACATGTTG -3'
<i>SiDML3a</i>	F:5'- AGCCATTAATGATGCCTCCCA -3' R:5'- GCAATCGGTGCGTGTAGTA -3'
<i>SiDML3b</i>	F:5'- CAGACCGGGTACTAAACAGATG -3' R:5'- GGAGTTTCTGGTTCCTGGATAA -3'
<i>SiROS1a</i>	F:5'- ATCTTTCCAGCTCTGCCTTTAT -3' R:5'- CTCGAGCAGCAACCATTATCT -3'
<i>SiROS1b</i>	F:5'- TTGTCTGTGTGCGAGGATTT -3' R:5'- TGCTGTCTTGCGGGATTT -3'
<i>SiROS1d</i>	F:5'- CATCGATCCAGTCACCACTATG -3' R:5'- CTTCGTCAAGCCATTTCTCTTTATC -3'
<i>Actin</i>	F:5'- CGCATATGTGGCTCTTGACT-3' R:5'- GGGCACCTAAATCTCTCTGC-3'

Gene-specific primers for real-time reverse transcription quantitative PCR (RT-qPCR)

were designed by the Primer Quest tool

(<http://www.idtdna.com/Primerquest/Home/Index>). F, forward; R, reverse.

Table. S2 Information of DNA demethylase genes in the 3 tested species

Latin name of specie	Gene name	Gene ID
<i>Arabidopsis thaliana</i>	<i>AtDML5a</i>	<i>AT2G31450.1</i>
	<i>AtDML5b</i>	<i>AT1G05900.1</i>
	<i>AtDML4</i>	<i>AT3G47830.1</i>
	<i>AtDML3</i>	<i>AT4G34060.3</i>
	<i>AtDML2</i>	<i>AT3G10010.1</i>
	<i>AtDME</i>	<i>AT5G04560.1</i>
	<i>AtROS1</i>	<i>AT2G36490.1</i>
<i>Oryza sativa</i>	<i>OsDML5</i>	<i>LOC_Os11g16580.1</i>
	<i>OsDML4</i>	<i>LOC_Os06g13070.1</i>

	<i>OsDML3a</i>	<i>LOC_Os02g29380.1</i>
	<i>OsDML3b</i>	<i>LOC_Os04g28860.1</i>
	<i>OsROS1a</i>	<i>LOC_Os01g11900.1</i>
	<i>OsROS1b</i>	<i>LOC_Os05g37350.1</i>
	<i>OsROS1c</i>	<i>LOC_Os05g37410.1</i>
	<i>OsROS1d</i>	<i>LOC_Os02g29230.1</i>
<i>Triticum aestivum</i>	<i>TaROS1b-1A.1</i>	<i>TraesCS1A02G278000.1</i>
	<i>TaROS1b-1B.1</i>	<i>TraesCS1B02G286900.2</i>
	<i>TaROS1b-1D.1</i>	<i>TraesCS1D02G277100.1</i>
	<i>TaROS1b-1A.2</i>	<i>TraesCS1A02G349600.1</i>
	<i>TaROS1b-1B.2</i>	<i>TraesCS1B02G364100.2</i>
	<i>TaROS1b-1D.2</i>	<i>TraesCS1D02G352500.2</i>
	<i>TaDML3a-3A</i>	<i>TraesCS3A02G022500.1</i>
	<i>TaDML3a-3B</i>	<i>TraesCS3B02G023200.1</i>
	<i>TaDML3a-3D</i>	<i>TraesCS3D02G024100.1</i>
	<i>TaDML5-4A</i>	<i>TraesCS4A02G232700.2</i>
	<i>TaDML5-4B</i>	<i>TraesCS4B02G083100.1</i>
	<i>TaDML5-4D</i>	<i>TraesCS4D02G081200.1</i>
	<i>TaROS1a-5A</i>	<i>TraesCS5A02G169000.1</i>
	<i>TaROS1a-5B</i>	<i>TraesCS5B02G165800.2</i>
	<i>TaROS1a-5D</i>	<i>TraesCS5D02G173300.2</i>
	<i>TaDML4-7A</i>	<i>TraesCS7A02G194800.1</i>
	<i>TaDML4-7B</i>	<i>TraesCS7B02G100500.1</i>
	<i>TaDML4-7D</i>	<i>TraesCS7D02G196400.1</i>