

Supplementary

Supplemental five figures

OsDXR interacts with OsMORF1 to regulate chloroplast development and RNA editing of chloroplast genes in rice

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dxr-1 MALKVVSFPGDLAAVSFLDSN-----RRSFQPAQSGPPVSNEGQKSSFPEKDLLFNATGST 56
dxr-2 MALKVVSFPGDLAAVSFLDS-----KEELSTSSKWTSRFKRGTEEQFP-----43
WT MALKVVSFPGDLAAVSFLDSNRGGAFNQLKVDLPFQTRDRRAVSL RTCCSMQQAAPPWFGRAVVEPGRRSWDGPKPIS 80

dxr-1 TMAWSSRC-----65
dxr-2 -----43
WT IVGSTGSIGTQTLDIVAENPDKFRVVALAAGSNVTLLADQVKTFKPKLVAVRNESLVDELKEALADCDWKPEIIPGEQGV 160

dxr-1-----65
dxr-2-----43
WT IEVARHPDAVTVVVTGIVGCAGLKPTVAAIEAGKDIALANKETLIAGGPFVLPLAQKHVKILPADSEHSAIFQCIQGLPE 240

dxr-1-----65
dxr-2-----43
WT GALRRILTASGGAFRDWPVDKLKEVKVADALKHPNWNMGKKITVDSATLFNKGLEVIEAHYLFGAEYDDIEIVIHPSI320

dxr-1-----65
dxr-2-----43
WT IHSMIETQDSSVLAQLGWPDMRIPILYTMSWPDRIYCSEVTWPRLDLCKLGSLTFKAPDNVKYPSMDLAYAAGRAGGTMT400

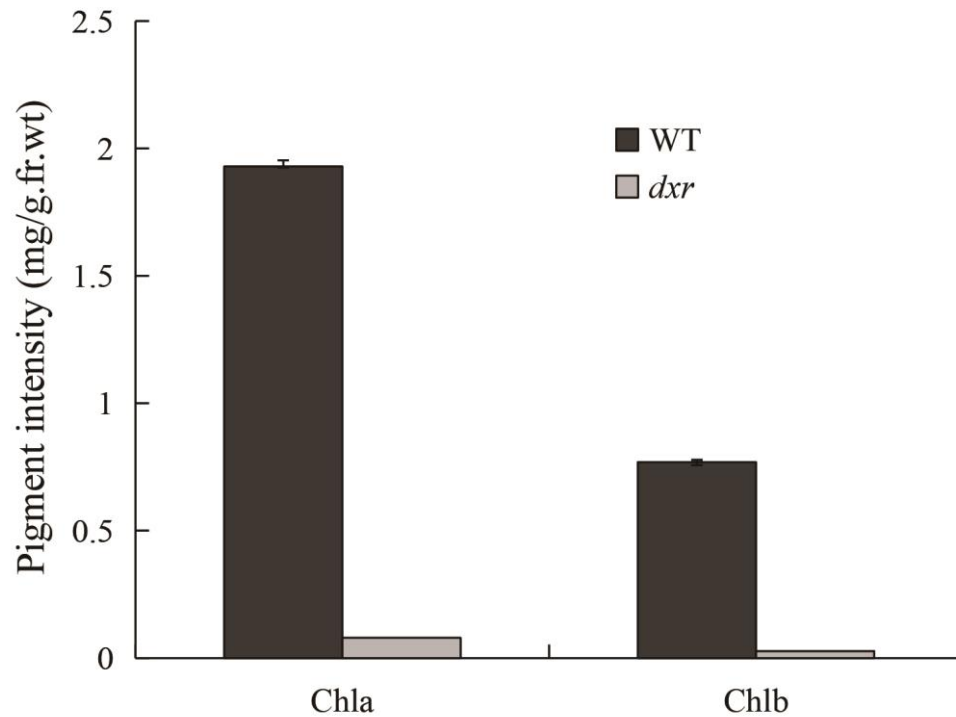
dxr-1-----65
dxr-2-----43
WT GVLSAANEKAVELFIDEKIGYLDIFKVVELTCDahrNELVTRPSLEEIIHYDLWAREYAASLQPSGLSPVPV473

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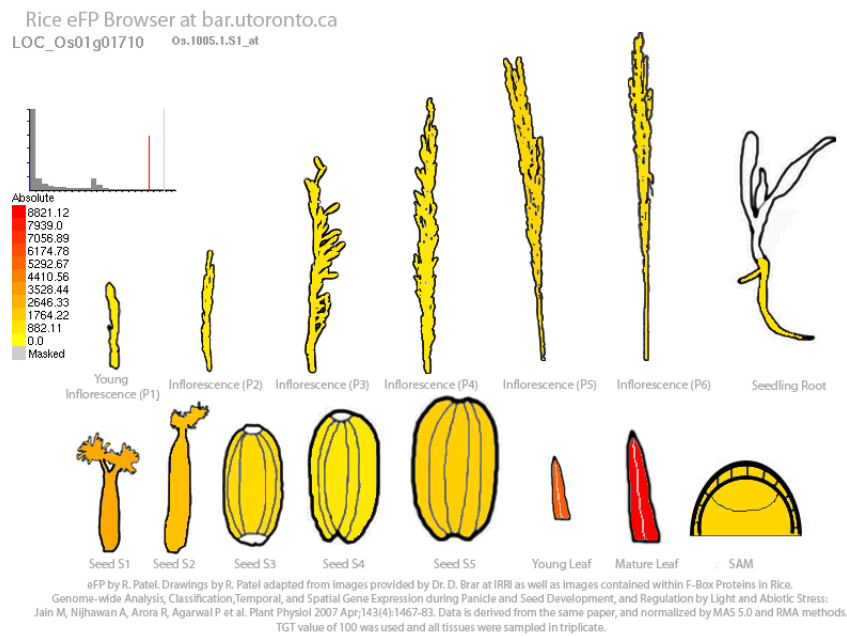
Appendix A. Amino acid sequence alignment among wild type, *dxr-1* and *dxr-2*.

Appendix B. Off-target effect detection

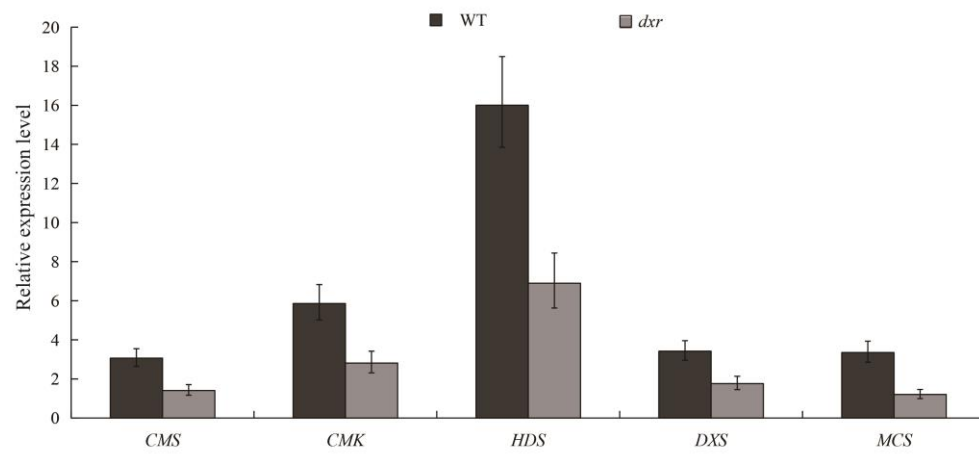
Sequence	MMs	Gene	Region	Mutations
TTCCTCAAGTCCAACA C AGG	3	Os02g0690300	intron	No
TTCCT G GACTCCAACAG G GT	3	Os02g0572600	cds	No
TTCCTCGACTCAAA T AGAG A	3	EPIOSAG00000034243	exon	No
TTCCTCGAC ACC C AGAGAGG	3	Os12g0171801	cds	No



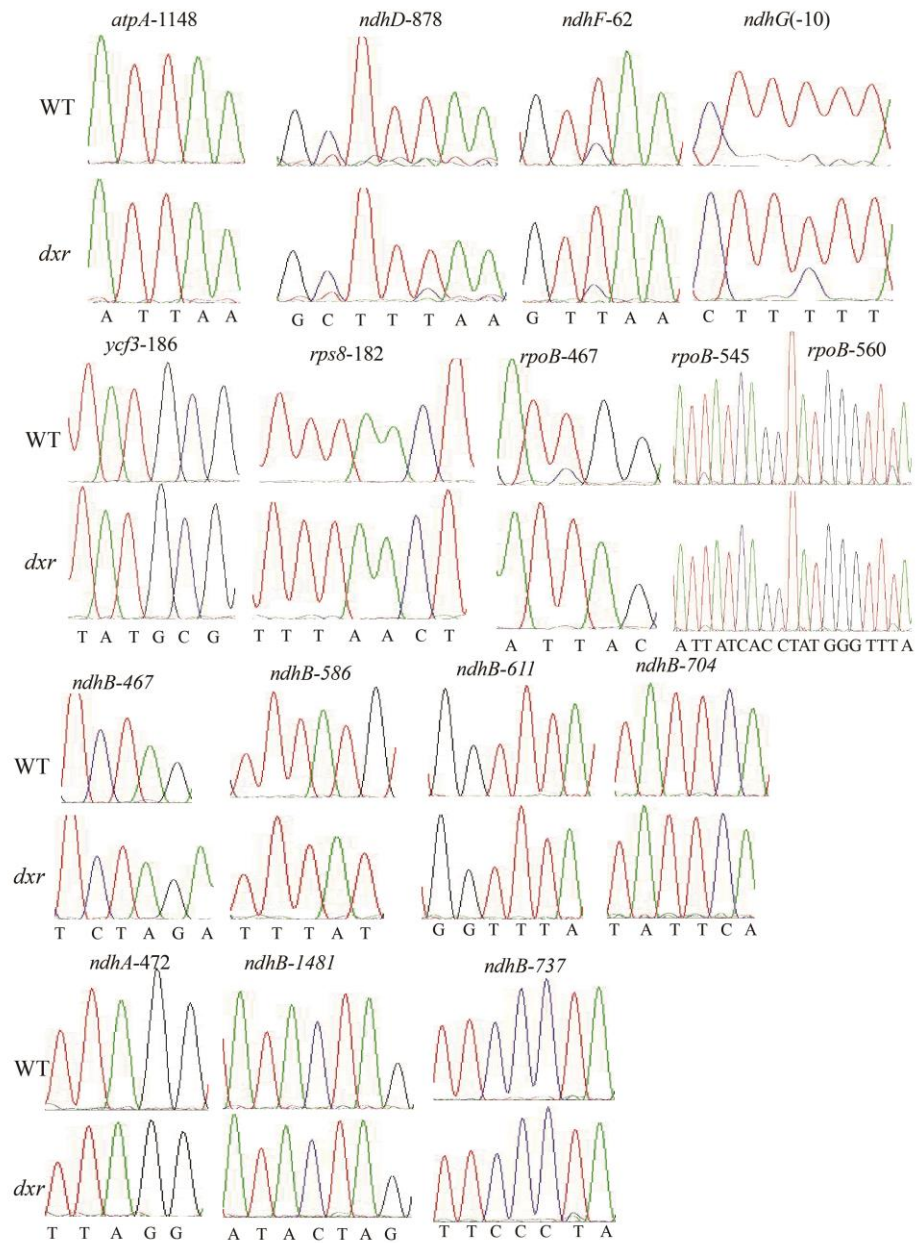
Appendix C. Chlorophyll contents of the wild type and *dxr*.



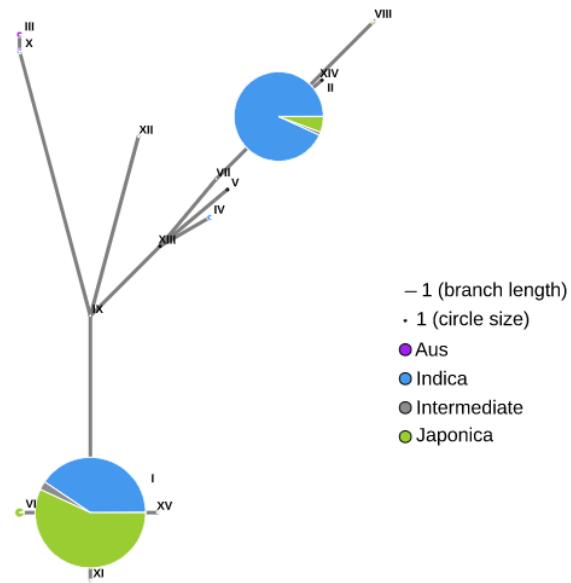
Appendix D. Expression pattern of *OsDXR* from the Rice eFP Browser.



Appendix E. Expression level of five MEP pathway genes.



Appendix F. Analysis of 16 RNA editing sites between the wild type and *dxr*.



Appendix G. Haplotype analysis of *OsDXR* (<http://ricevarmap.ncpgr.cn/>).