

**Table S1.** Transcriptome data statistics of different treatment groups

Sample	Raw_reads	Clean_reads	Error_rate	Q20	Q30	GC_pct
WS_CK_1	21874743	21324562	0.03	97.32	92.7	45.9
WS_CK_2	21645713	20604190	0.03	97.28	92.46	45.03
WS_CK_3	21374492	20748685	0.03	97.24	92.34	44.78
WS_5_1	23325380	23069280	0.03	97.3	92.69	45.02
WS_5_2	21948662	21534312	0.03	97.72	93.39	44.16
WS_5_3	21039785	20612134	0.03	97.59	93.09	44.22
WS_10_1	23412414	23126040	0.03	97.42	92.92	45.57
WS_10_2	23189662	22557210	0.03	97.29	92.43	44.77
WS_10_3	23862838	23280532	0.03	97.35	92.56	44.94
WS_20_1	22179600	21892648	0.03	97.5	93.11	45.68
WS_20_2	25327581	24719744	0.03	97.08	91.98	45.06
WS_20_3	23503783	22723337	0.03	97.71	93.37	45.03
WS_40_1	23108706	22881848	0.03	97.63	93.38	46
WS_40_2	23501155	22976668	0.03	97.71	93.36	45.13
WS_40_3	24948672	24172623	0.03	97.68	93.29	45.22

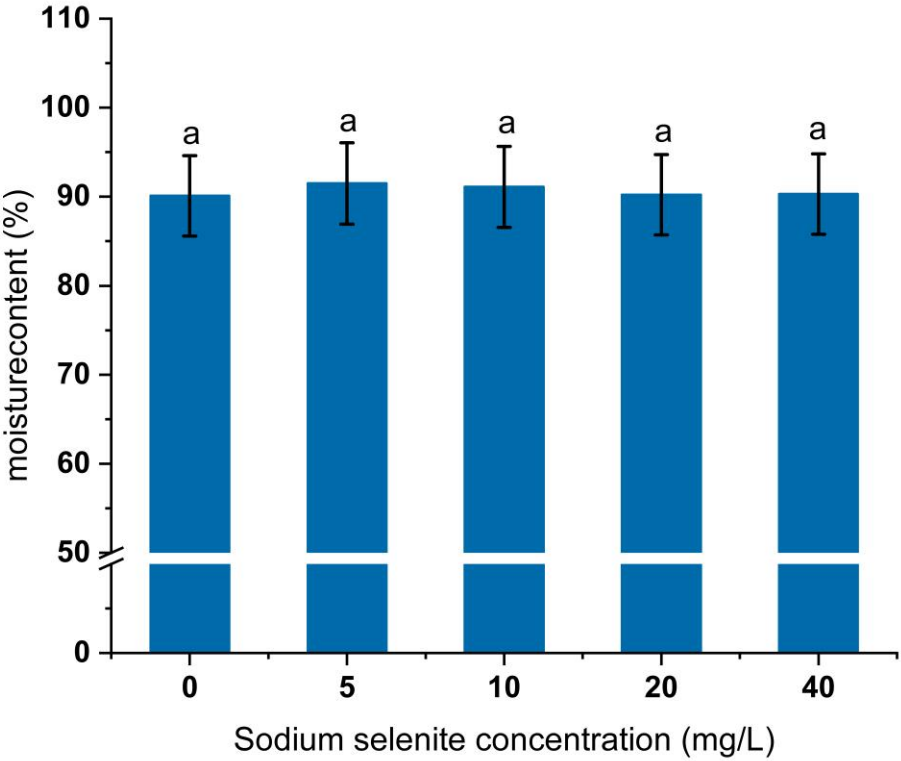
**Table S2.** Annotated information of 60 differentially expressed genes screened from two modules

Module	Gene Cluster	Gene name	Gene Description
blue	Cluster-81632.49952	TTL3	inactive TPR repeat-containing thioredoxin TTL3-like
blue	Cluster-81632.35098	NTRC	NADPH-dependent thioredoxin reductase 3-like
blue	Cluster-81632.32620	MOT2	molybdate transporter 2, transcript variant X1
blue	Cluster-81632.38228	TDX	TPR repeat-containing thioredoxin TDX
blue	Cluster-81632.49237	APRL5	5'-adenylylsulfate reductase-like 5
blue	Cluster-81632.33364	APS1	ATP sulfurylase 1
blue	Cluster-81632.37541	AAED1	thioredoxin-like protein AAED1
blue	Cluster-81632.39167	SULTR3;3	probable sulfate transporter 3.3
blue	Cluster-81632.26232	RWK1	Eukaryotic glutathione synthase
blue	Cluster-81632.36048	GSTF8	glutathione S-transferase F8, chloroplastic-like
blue	Cluster-81632.45303	PIP5K9	phosphatidylinositol 4-phosphate 5-kinase 9
blue	Cluster-81632.31474	STR2	thiosulfate/3-mercaptopyruvate sulfurtransferase 1, mitochondrial
blue	Cluster-81632.21924	TRXM2	Thioredoxin M2, chloroplastic
blue	Cluster-81632.40195	DIT2-1	dicarboxylate transporter 2.1, chloroplastic-like
blue	Cluster-81632.32717	ISS1	aspartate aminotransferase-like
blue	Cluster-81632.45384	GLX2-1	hydroxyacylglutathione hydrolase 1, mitochondrial-like
blue	Cluster-81632.31680	NTRC	NADPH-dependent thioredoxin reductase 3
blue	Cluster-81632.43978	At1g43560	thioredoxin Y2, chloroplastic
blue	Cluster-81632.15847	GSTL3	Glutathione S-transferase L3
blue	Cluster-81632.37348	GSTF9	Glutathione S-transferase F9
blue	Cluster-81632.36334	GSTU16	Glutathione S-transferase U16
blue	Cluster-81632.20905	At2g37240	thioredoxin-like protein AAED1, chloroplastic
blue	Cluster-81632.41462	SBP1	selenium-binding protein 1-like
blue	Cluster-81632.56902	SULTR4;1	sulfate transporter 4.1, chloroplastic
blue	Cluster-81632.31607	GSTT2	Glutathione S-transferase T2
blue	Cluster-81632.40972	PHO1-H8	Brassica napus phosphate transporter PHO1 homolog 8-like
blue	Cluster-81632.49268	TXNRD2	Thioredoxin reductase SEP1
blue	Cluster-81632.37650	NTRC	NADPH-dependent thioredoxin reductase 3-like
blue	Cluster-81632.42766	WDR26	WD repeat-containing protein 26-like
blue	Cluster-81632.38192	GSTF9	Glutathione S-transferase F9
blue	Cluster-81632.49952	TTL3	inactive TPR repeat-containing thioredoxin TTL3-like
turquoise	Cluster-81632.28496	yqjG	glutathionyl-hydroquinone reductase YqjG-like
turquoise	Cluster-81632.37456	APR2	5'-adenylylsulfate reductase 2
turquoise	Cluster-81632.33037	NIFS1	Cysteine desulfurase NFS1
turquoise	Cluster-81632.30832	flad1	3'-phosphoadenosine 5'-phosphosulfate sulfotransferase
turquoise	Cluster-81632.25707	GSTU5	Glutathione S-transferase U5
turquoise	Cluster-81632.8037	GSTU4	Glutathione S-transferase U4
turquoise	Cluster-81632.36631	GSTZ1	Glutathione S-transferase Z1
turquoise	Cluster-81632.13618	MGST3	Microsomal glutathione S-transferase 3
turquoise	Cluster-81632.44615	GSTF3	Glutathione S-transferase F3
turquoise	Cluster-81632.38210	GPX6	probable phospholipid hydroperoxide glutathione

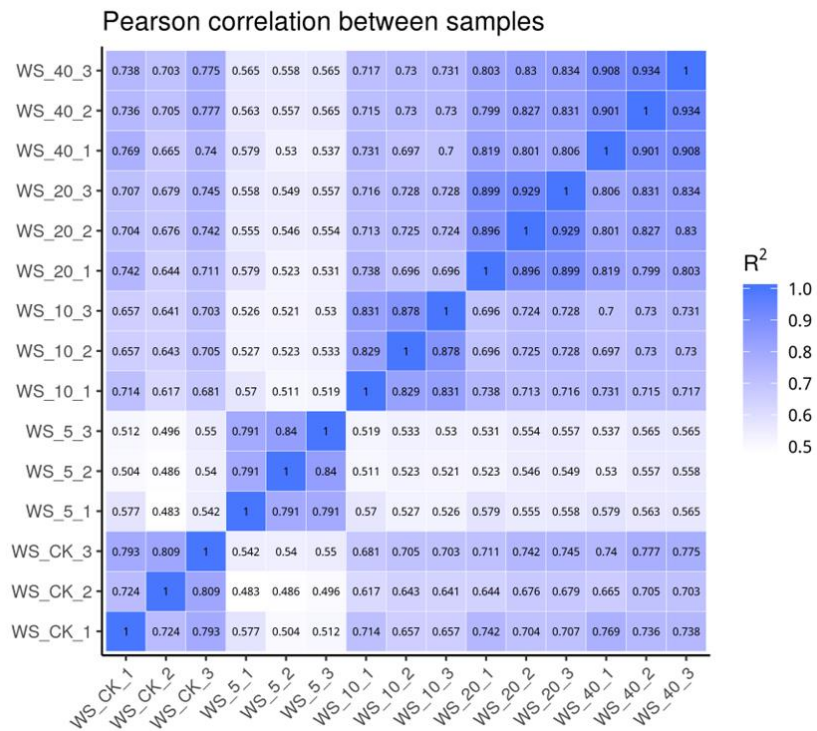
turquoise	Cluster-81632.38203	GPX6	peroxidase 6 probable phospholipid hydroperoxide glutathione peroxidase 6
turquoise	Cluster-81632.36062	SBP2	Selenium-binding protein 2
turquoise	Cluster-81632.3700	MGST3	Microsomal glutathione S-transferase 3
turquoise	Cluster-81632.35892	STR16	Thiosulfate sulfurtransferase 16
turquoise	Cluster-81632.38978	APS1	ATP sulfurylase 1
turquoise	Cluster-81632.22952	GPX2	probable glutathione peroxidase 2
turquoise	Cluster-81632.28993	APR3	5'-adenylylsulfate reductase 3
turquoise	Cluster-81632.28990	APR3	5'-adenylylsulfate reductase 3
turquoise	Cluster-81632.24050	APR3	5'-adenylylsulfate reductase 3
turquoise	Cluster-81632.44949	LGUL	LGUL mRNA for putative lactoylglutathione lyase
turquoise	Cluster-81632.29854	GSTL2	CDP-diacylglycerol--glycerol-3-phosphate 3-phosphatidyltransferase 2
turquoise	Cluster-81632.38724	At3g24170	glutathione reductase, cytosolic-like
turquoise	Cluster-81632.53780	APR1	5'-adenylylsulfate reductase 1, chloroplastic
turquoise	Cluster-81632.34125	GSTU26	Glutathione S-transferase U26
turquoise	Cluster-81632.38515	NFS2	cysteine desulfurase 1, chloroplastic-like
turquoise	Cluster-81632.38510	DHAR2	glutathione S-transferase DHAR1, mitochondrial
turquoise	Cluster-81632.40069	DHAR1	glutathione S-transferase DHAR1, mitochondrial-like
turquoise	Cluster-81632.27420	APR1	5'-adenylylsulfate reductase 1, chloroplastic
turquoise	Cluster-81632.38725	GR1	glutathione reductase, cytosolic
turquoise	Cluster-81632.28933	APR3	5'-adenylylsulfate reductase 3, chloroplastic

---

**Figure S1.** Changes in water content of mustard treated with different concentrations of sodium selenite.



**Figure S2.** Heat map of correlation of gene expression level in test samples.



**Figure S3.** Statistics of differentially expressed genes in samples treated with different concentrations of  $\text{Na}_2\text{SeO}_3$ .

