

Supplementary material

In Vitro Evaluation of Antioxidant Potential of the Invasive Seagrass *Halophila stipulacea*

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Supplementary material

Table 1. List of the 84 oxidative stress-related genes of the WI-38 cell line analyzed in our study (from: RT² Profiler™ PCR Array Human Oxidative Stress Plus (Product no. 330231; Cat. No. PAHS-065Y)).

GENE SUPERFAMILY	GENE SUBFAMILY	GENES ANALYSED
Antioxidants	Glutathione Peroxidases	GPX1. GPX2. GPX3. GPX4. GPX5. GSTP1. GSTZ1.
	Peroxiredoxins	PRDX1. PRDX2. PRDX3. PRDX4. PRDX5. PRDX6 (AOP2).
	Other Peroxidases	CAT. CYBB. CYGB. DUOX1. DUOX2. EPX. LPO. MPO. PTGS1 (COX1). PTGS2 (COX2). TPO. TTN.
	Other Antioxidants	ALB. APOE. GSR. MT3. VIMP. SOD1. SOD3. SRXN1. TXNRD1. TXNRD2.
Reactive Oxygen Species Metabolism	Superoxide Dismutases	SOD1. SOD2. SOD3.
	Other Superoxide Metabolism Genes	ALOX12. CCS. DUOX1. DUOX2. MT3. NCF1. NCF2. NOS2 (INOS). NOX4. NOX5. UCP2.
	Other Reactive Oxygen Species Metabolism Genes	AOX1. BNIP3. EPHX2. MPV17. SFTPD.
	Oxidative Stress Responsive Genes	APOE. ATOX1. CAT. CCL5 (RANTES). CYGB. DHCR24. DUOX1. DUOX2. DUSP1 (PTPN16). EPX. FOXM1. FTH1. GCLC. GCLM. GPX1. GPX2. GPX3. GPX4. GPX5. GSR. GSS. HMOX1. HSPA1A (HSP70-1A). KRT1. LPO. MBL2. MPO. MSRA. NQO1. NUDT1. PDLIM1. PRDX2. PRDX5. PRDX6 (AOP2). PRNP. RNF7. VIMP. SEPP1. SIRT2. SOD1. SOD2. SQSTM1. SRXN1. TPO. TTN. TXN. TXNRD1. TXNRD2.
Oxygen Transporters	CYGB. MB.	
Pathway Activity Signature Genes	AKR1C2. BAG2. FHL2. GCLM. GLA. HMOX1. HSP90AA1. LHPP. NCOA7. NQO1. PTGR1. SLC7A11. SPINK1. TRAPPC6A. TXN. TXNRD1.	

Supplementary material

Table S2: Oxidative stress-related genes of the WI-38 cell line **upregulated** (fold regulation > 2; in red) or **downregulated** (fold regulation < - 2; in blue) during treatments with H₂O₂. old leaf extract alone. before and after hydrogen peroxide injury.

<i>GENE</i>	Description	H ₂ O ₂ (10 mM)	Extract (10 µgml ⁻¹)	Extract added before H ₂ O ₂	Extract added after H ₂ O ₂
<i>ALB</i>	Albumin	15.4	13.2	43.4	27.5
<i>APOE</i>	Apolipoprotein E	4.2	3.6	2.5	-3.6
<i>CCL5</i>	Chemokine (C-C motif) ligand 5	1.6	1.1	62.5	9.7
<i>CYBB</i>	Cytochrome b-245	-38.0	3.9	-26.2	-18.5
<i>DUOX1</i>	Dual oxidase 1	-2.1	-1.1	-1.7	-2.4
<i>DUOX2</i>	Dual oxidase 2	-2.5	-1.1	-3.5	-4.6
<i>EPHX2</i>	Epoxide hydrolase 2, cytoplasmic	3.1	-19.3	-9.3	-6.6
<i>EPX</i>	Eosinophil peroxidase	2.0	-2.1	1.5	1.1
<i>GCLC</i>	Glutamate-cysteine ligase	2.1	-2.1	1.5	1.1
<i>GPX2</i>	Glutathione peroxidase 2	1.5	1.5	-1.3	-1.8
<i>GPX5</i>	Glutathione peroxidase 5	-1.7	1.1	-1.3	-1.6
<i>GSR</i>	Glutathione reductase	-5.7	1.1	2.3	3.2
<i>HSPA1A</i>	Heat shock 70kDa protein 1A	-1.9	-3.8	1.8	-1.2
<i>KRT1</i>	Keratin 1	1.2	1.1	-1.1	1.3
<i>LPO</i>	Lactoperoxidase	1.6	1.1	2.3	3.2
<i>MB</i>	Myoglobin	1.6	1.1	2.3	17.0
<i>MBL2</i>	Mannose-binding lectin 2	1.6	1.1	2.3	3.2
<i>MPO</i>	Myeloperoxidase	14.3	51.2	2.3	3.2
<i>MT3</i>	Metallothionein 3	8.7	37.0	15.4	2.0
<i>NOS2</i>	Nitric oxide synthase 2	1.6	1.1	2.3	3.2
<i>NOX5</i>	NADPH oxidase domain 5	-1.1	-1.4	-12.7	1.6
<i>PRDX3</i>	Peroxiredoxin 5	1.6	1.1	2.3	3.2
<i>PTGS2</i>	Prostaglandin-endoperoxide synthase 2	-1.3	1.7	-1.2	-1.5
<i>SEPP1</i>	Selenoprotein P, plasma, 1	-5.0	-1.1	-1.4	-3.3
<i>SFTPD</i>	Surfactant protein D	-1.4	2.8	-3.1	-1.5
<i>SOD3</i>	Superoxide dismutase 3	-62.8	-89.8	4.7	-30.6

Supplementary material

<i>TPO</i>	Thyroid peroxidase	2.4	1.1	1.5	1.6
<i>AKR1C2</i>	Aldo-keto reductase member C2	1.6	1.1	2.3	16.7
<i>SLC7A11</i>	Solute carrier family 7 member 11	1.3	-1.2	-2.0	1.1
<i>SPINK1</i>	Serine peptidase inhibitor. Kazal type 1	1.4	-1.0	-1.4	1.0
<i>TXNRD1</i>	Thioredoxin reductase 1	1.6	1.1	2.3	3.2