Supplementary Materials

Table S1. Real-time PCR primer sequences.

Gene	Primer Sequence (Forward)	Primer Sequence (Reverse)
	NHDF cells	
Cu/Zn SOD	5'-GAGTTTGGAGATAATACAGCAGGCTGT-3'	5'- TTTCATGGACCACCAGTGTGC-3'
MnSOD	5'-GTGGAGAACCCAAAGGGGAGTT-3'	5'-GTGGAATAAGGCCTGTTGTTCCTT-3'
CAT	5'-GTTACTCAGGTGCGGGCATTCTAT-3'	5'- GAAGTTCTTGACCGCTTTCTTCTG-3'
GPx	5'-CGGGACTACACCCAGATGAA -3'	5'- TCTCTTCGTTCTTGGCGTTC-3'
GST	5'-CCTGTACCAGTCCAATACCATCCT-3'	5'-TCCTGCTGGTCCTTCCCATA-3'
GR	5'-ATCCCCGGTGCCAGCTTAGG-3'	5'- AGCAATGTAACCTGCACCAACAA-3'
MMP-1	5'-TCTCTT GGACTCTCCCATTCT-3'	5'-AATAAGTACTGGGCTGTTCAGG-3'
MMP-2	5'-GATACCCCTTTGACGGTAAGGA -3'	5'-CCTTCTCCCAAGGTCCATAGC-3'
MMP-3	5'-GGTGTGGAGTTCCTGATGTT-3'	5'-TGGTCCCTGTTGTATCCTTTG-3'
MMP-9	5'-TGTACCGCTATGGTTACACTCG-3'	5'-GGCAGGGACAGTTGCTTCT -3'
	B16F10 cells	
TYR	5'-GTCCACTCACAGGGATAGCAG-3'	5'-AGAGTCTCTGTTATGGCCGA-3'
TYRP-1	5'-ATGGAACGGGAGGACAAACC-3'	5'-TCCTGACCTGGCCATTGAAC-3'
TYRP-2	5'-CAGTTTCCCCGAGTCTGCAT-3'	5'-GTCTAAGGCGCCCAAGAACT-3'
β-actin	5'-TGGAATCCTGTGGCATCCATGAAAC-3'	5'-TAAAACGCAGCTCAGTAACAGTCCG-3'

SOD: superoxide dismutase; CAT: catalase； GPx: glutathione peroxidase; GST: glutathione-S-transferase; GR: glutathione reductase; MMPs: matrix metallopeptidases; TYR, tyrosinase; TYRP: tyrosinase related protein.

Table S2. Correlation coefficient of related parameters in NHDF and B16F10 cells.

Independent Parameters	Dependent Parameters	Correlation Coefficients	*p*
	NHDF cells		
N-Nrf2	Cu/ZnSOD	+0.853	0.000
	GPx	+0.781	0.003
	GST	+0.934	0.000
	GR	+0.930	0.000
	Keap1	–0.931	0.000
Sirt1	N-Nrf2	+0.981	0.000
	PGC-1α	+0.998	0.000
p-JNK	p-c-Fos	+0.932	0.000
	p-c-Jun	+0.987	0.000
	MMP-1	+0.820	0.001
	MMP-2	+0.913	0.000
	MMP-9	+0.906	0.000
p-p38	p-c-Fos	+0.980	0.000
	p-c-Jun	+0.992	0.000
	MMP-1	+0.847	0.001

	MMP-2	+0.979	0.000
	MMP-9	+0.940	0.000
	B16F10 cells		
	p-CREB	+0.959	0.000
p-PKA	MITF	+0.979	0.000
	TYR（mRNA）	+0.910	0.000
	TYR（Protein）	+0.991	0.000
	TYRP-1	+0.908	0.000