Salidroside promotes sensitization to Doxorubicin in human cancer cells by affecting the PI3K/Akt/HIF signal pathway and inhibiting the expression of tumor-resistance related proteins

Qi Zeng ^{1,2,†}, Xu Nie ^{1,2,†}, Li Li, Hui-Fang Liu ^{1,2}, Yang-Yao Peng ^{1,2}, Wang-Ting Zhou ^{1,2}, Xiao-Jia Hu ³, Xin-Yi Xu ^{1,2,*}, Xue-Li Chen ^{1,2,*}

- 1 Engineering Research Center of Molecular and Neuro Imaging of the Ministry of Education, School of Life Science and Technology, Xidian University;
- 2 Xi'an Key Laboratory of Intelligent Sensing and Regulation of trans-Scale Life Information, School of Life Science and Technology, Xidian University;
- 3 Nature's Sunshine (Shanghai) Product Inc

 Table 1S The name of key molecular targets

No.	Name	Gene ID	
1	GLA	2717	
2	GLB1	2720	
3	ADH1B	125	
4	DAPK1	1612	
5	KIF11	3832	
6	MMP-8	4317	
7	PDE5A	8654	
8	BAX	581	
9	IGF1R	3480	
10	НСК	3055	
11	GSTP1	2950	
12	CCNA2	890	
13	EPHB4	2050	
14	MMP-13	4322	
15	Bcl-2	596 5170 5468 2100	
16	PDPK1		
17	PPARG		
18	ESR2		
19	MMP-2	4313	
20	EGFR	1956	
21	PTGS2	5743	
22	ESR1	2099	
23	NOS3	4846	
24	SRC	6714	
25	MMP-9	4318	
26	AKT1	207	

Table 2S GO analysis of intersection target gene

Function of Gene	ID	Description	-log P	Gene number
BP	GO:0034599	cellular response to oxidative stress	-13.0403	10
BP	GO:1901652	response to peptide	-10.7105	10
BP	GO:0046777	protein autophosphorylation	-10.5248	8
BP	GO:0072593	reactive oxygen species metabolic process	-9.909	8
BP	GO:0032870	cellular response to hormone stimulus	-9.71608	10
BP	GO:0070141	response to UV-A	-9.2442	4
BP	GO:0010631	epithelial cell migration	-9.08955	8
BP	GO:0097191	extrinsic apoptotic signaling pathway	-9.06738	7
BP	GO:0048145	regulation of fibroblast proliferation	-8.01575	5
BP	GO:0032963	collagen metabolic process	-7.30923	5
BP	GO:0031960	response to corticosteroid	-6.58724	5
BP	GO:0031349	positive regulation of defense response	-6.38657	7
BP	GO:0043299	leukocyte degranulation	-6.37022	7
BP	GO:0001558	regulation of cell growth	-4.48934	5
BP	GO:0097237	cellular response to toxic substance	-4.14169	4
BP	GO:0043280	positive regulation of cysteine-type endopeptidase activity involved in apoptotic process	-3.55842	3
BP	GO:0007507	heart development	-2.79667	4
CC	GO:0031983	vesicle lumen	-4.8739	5
CC	GO:0005901	caveola	-4.2441	3
CC	GO:0005635	nuclear envelope	-3.0937	4
CC	GO:0043235	receptor complex	-2.8431	4
CC	GO:0031012	extracellular matrix	-2.7739	4
MF	GO:0004672	protein kinase activity	-7.6215	8
MF	GO:0030235	nitric-oxide synthase regulator activity	-7.2318	3
MF	GO:0004222	metalloendopeptidase activity	-5.5572	4
MF	GO:0030331	estrogen receptor binding	-5.1368	3
MF	GO:0019903	protein phosphatase binding	-4.9979	4
MF	GO:0005516	calmodulin binding	-4.5015	4
MF	GO:0020037	heme binding	-3.5401	3

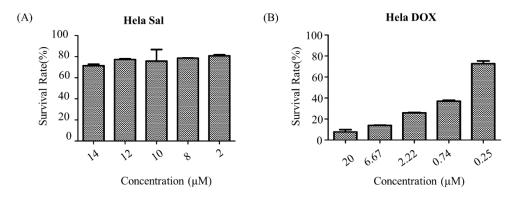


Fig.1S Survival rate of HeLa cells with the treatment of Sal (A) and DOX (B)

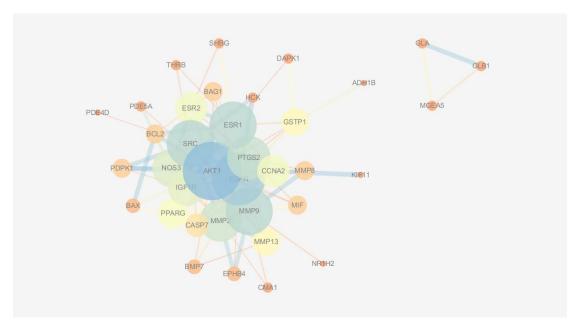


Fig.2S Sal-Target-Disease network