

Supplementary information

Transition of autophagy and apoptosis in fibroblasts depends on dominant expression of HIF-1 α or p53

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Table S1 Changes in protein expression, autophagy and apoptosis in HDFs under different moderate hypoxia culture time

Time (h)	HIF-1 α	p53	LC3II/LC3I	Beclin-1	p62	Collagen III	Apoptotic cells (%)
0	1.00 $\pm$ 0.48	1.00 $\pm$ 0.12	1.03 $\pm$ 0.18	0.99 $\pm$ 0.02	0.99 $\pm$ 0.12	1.00 $\pm$ 0.74	6.25 $\pm$ 0.25
6	6.61 $\pm$ 0.92	0.92 $\pm$ 0.17	0.85 $\pm$ 0.09	0.77 $\pm$ 0.05	1.22 $\pm$ 0.04	3.41 $\pm$ 0.82	6.30 $\pm$ 0.06
12	5.89 $\pm$ 2.03	0.66 $\pm$ 0.18	1.23 $\pm$ 0.08	1.36 $\pm$ 0.09*	1.03 $\pm$ 0.06	6.73 $\pm$ 1.07***	4.90 $\pm$ 0.45**
24	13.87 $\pm$ 4.88*	0.53 $\pm$ 0.16*	1.42 $\pm$ 0.07*	1.56 $\pm$ 0.10***	0.53 $\pm$ 0.22**	8.77 $\pm$ 1.39****	4.44 $\pm$ 0.28***
48	40.85 $\pm$ 10.35****	0.58 $\pm$ 0.09*	1.73 $\pm$ 0.20***	1.49 $\pm$ 0.23**	0.44 $\pm$ 0.10**	14.40 $\pm$ 1.77****	3.64 $\pm$ 0.41****
F value	27.83	5.929	19.58	23.21	21.81	53.88	38.95
P value	<0.0001	0.0104	0.0001	<0.0001	<0.0001	<0.0001	<0.0001

* P <0.05, ** P <0.01, *** P <0.001, **** P <0.0001 (one-way ANOVA and Dunnett's multiple comparisons test, vs. 0 h)

Table S2 Changes in protein expression, autophagy and apoptosis in HDFs after knocking down HIF-1 α , p53 or overexpressing p53

	Ctrl	sh-HIF-1 α	Ctrl	sh-p53	Ctrl	p53 ^{OE}
HIF-1 α			1.00 $\pm$ 0.14	5.28 $\pm$ 0.50	0.97 $\pm$ 0.11	0.65 $\pm$ 0.08
P value				0.0001		0.0159
p53	1.00 $\pm$ 0.11	2.36 $\pm$ 0.20				
P value		0.0004				
LC3II/LC3I	1.00 $\pm$ 0.20	0.31 $\pm$ 0.05	1.00 $\pm$ 0.08	1.68 $\pm$ 0.31	1.00 $\pm$ 0.27	0.26 $\pm$ 0.04
P value		0.0044		0.0215		0.0398
Beclin-1	0.97 $\pm$ 0.07	0.60 $\pm$ 0.10	1.04 $\pm$ 0.09	1.57 $\pm$ 0.21	1.00 $\pm$ 0.21	0.62 $\pm$ 0.08
P value		0.0062		0.0125		0.0448
p62	0.96 $\pm$ 0.14	1.64 $\pm$ 0.23	1.03 $\pm$ 0.01	0.89 $\pm$ 0.05	0.98 $\pm$ 0.09	1.41 $\pm$ 0.16
P value		0.0145		0.027		0.0194
Collagen III	1.00 $\pm$ 0.08	0.81 $\pm$ 0.06	0.97 $\pm$ 0.07	3.98 $\pm$ 0.27	0.97 $\pm$ 0.11	0.54 $\pm$ 0.12
P value		0.0344		0.0015		0.0112
Apoptotic cells (%)	16.09 $\pm$ 2.56	25.55 $\pm$ 2.18	16.60 $\pm$ 2.44	9.75 $\pm$ 0.19	1.46 $\pm$ 0.08	4.83 $\pm$ 0.67
P value		0.0088		0.0391		0.012