

Supplementary information S2 (table) | Description of genes regulated by p53 (part II)*

#	Gene Name(s)	Location	Type	bp from TSS	Function	PHMM Score	Refs
1	ABCB1, MDR1	Promoter	repressor	-89 to -57bp		63.34	1
2	ACTA2	Promoter	activator	-330 to -311bp	CytoS	67.61	2
3	AIFM2, AMID	Promoter	activator	-596 to -567bp	A	81.34	3
3	AIFM2, AMID	Promoter	activator	-682 to -654bp	A	66.15	3
4	ANLN	Promoter	repressor	-866 to -841bp	CytoS	73.89	4
5	APAF1	Promoter	activator	-603 to -571bp	A	90.33	5
6	APC	Promoter	both	-230 to -198bp	R-	74.23	6
7	ARID3A, E2FBP1	Intron 2	activator	4240 to 4259bp	C	83.53	7
8	ATF3	Promoter	activator	-388 to -352bp	T	80.67	8
9	BAI1	Intron 9	activator	17444 to 17462bp	ECM	79.09	9
10	BAX	Intron 1	activator	354 to 373bp	A	87.61	10
11	BBC3, PUMA	Promoter	activator	-145 to -126bp	A	79.34	11
12	BCL2L14, BCL-G	5'-UTR, Intron 1	activator	1612 to 1631bp	A	64.87	12
13	BCL6	5'-UTR, Intron 1	activator	696 to 728bp	-F	78.49	13
14	BDKRB2, BK2	Promoter	activator	-86 to -67bp	CytoR	45.12	14
15	BID	Intron 1	activator	17277 to 17296bp	A	80.44	15
16	BIRC5, survivin	5'-UTR, Exon 1	repressor	34 to 56bp	A	81.44	16
17	BNIP3L	Downstream (4476)	activator	34574 to 34598bp	A	85	17
18	BTG2, TIS21	Promoter	activator	-25 to -5bp	C, DNA-R	42.33	18
19	C12orf5	Intron 1	activator	411 to 432bp	?	93.39	19
20	C13orf15, RGC32	Intron 2	activator	1116 to 1138bp	C	76.75	20
21	CASP1	Promoter	activator	-99 to -79bp	CytoR	79.94	21
22	CASP10	Promoter	activator	-1082 to -1058bp		70.01	22
23	CASP6	Intron 3	activator	5974 to 5997bp	A	76.81	23
24	CAV1	Promoter, 5'-UTR, Exon 1	activator	-17 to 13bp	E,C	52.91	24
25	CCNG1	5'-UTR, Intron 1	activator	356 to 375bp	C	86.92	25
26	CCNK	5'-UTR, Intron 1	activator	2887 to 2908bp	C	81.53	26
27	CD82, KAI1	Promoter	activator	-886 to -862bp	ECM	77.17	27
28	CDC25C	Promoter	repressor	-155 to -125bp	C	87.3	28
29	CDKN1A, p21	Promoter	activator	-1373 to -1354bp	C, S	49	29
29	CDKN1A, p21	Promoter	activator	-1378 to -1359bp	C, S	70.59	30
29	CDKN1A, p21	Promoter	activator	-2260 to -2241bp	C, S	82.92	30
30	Chmp4C	Promoter	activator	-497 to -460bp	E	90.68	31

31	COL18A1	Promoter	activator	-2836 to -2817bp	ECM	77.62	12
31	COL18A1	Promoter	activator	-2360 to -2341bp	ECM	77.62	12
32	CRYZ	5'-UTR, Intron 1	repressor	7721 to 7743bp	?	74.99	4
33	CTSD, IRDD	Promoter	activator	-373 to -352bp	A	53.25	32
33	CTSD, IRDD	Promoter	activator	-144 to -125bp	A	66.26	32
34	CX3CL1, fractalkine	Promoter	activator	-279 to -259bp	CytoR	78.38	33
35	DDB2	5'-UTR, Exon 1	activator	18 to 38bp	DNA-R	92.09	34
36	DDIT4, REDD1	Promoter	activator	-302 to -283bp	DNA-R	66.03	35
37	DDR1	Promoter	activator	-1494 to -1475bp	GR, R+	74.81	36
38	DKK1	Promoter	activator	-2136 to -2111bp	A	75.34	37
39	DNMT1	5'-UTR, Exon 1	repressor	29 to 55bp	?	82.01	38
40	DUSP1, MKP1	Intron 2	activator	1235 to 1255bp	C, A	63.61	39
41	DUSP5	Promoter	activator	-1127 to -1107bp	C, CytoS	69.28	40
42	EDN2	Intron 3	activator	2197 to 2216bp	?	88.14	41
43	EEF1A1	Exon 4, CDS	activator	1869 to 1890bp	CytoS, A	81.43	42
43	EEF1A1	Exon 2, CDS	activator	1044 to 1067bp	CytoS, A	78.98	42
43	EEF1A1	Exon 3, CDS	activator	1670 to 1691bp	CytoS, A	61.94	42
44	EGFR	Promoter, 5'-UTR, Exon 1	activator	-19 to 3bp	C, R+	72.16	43
45	EphA2	Promoter	activator	-1541 to -1519bp	A	78.25	44
46	FANCC, FAC	Promoter	activator	-1286 to -1257bp	A, DNA-R	71.11	45
47	FAS, CD95	Intron 1	activator	779 to 798bp	A	84.08	46
48	FDXR	Promoter	activator	-43 to -24bp		80.48	47
49	GADD45A	Intron 3	activator	1576 to 1595bp	DNA-R	86.2	48
50	GDF15, MIC-1	5'-UTR, Exon 1, CDS	activator	12 to 31bp	A	79.68	49
50	GDF15, MIC-1	Promoter	activator	-866 to -847bp	A	80.39	50
51	GML	Promoter	activator	-18969 to -18950bp	C	90.16	51
52	GPX1	Promoter	activator	-182 to -163bp	DNA-R	83.67	19
53	HBV		repressor			69.91	52
54	HD, Huntington	Intron 2	activator	15233 to 15259bp	CNS	78.76	53
54	HD, Huntington	Promoter	activator	-1855 to -1833bp	CNS	72.93	53
54	HD, Huntington	Intron 3	activator	25968 to 25993bp	CNS	83.11	53
55	HGF, SF	Promoter	activator	-324 to -305bp	C, R+	59.08	54
56	HIC1	5'-UTR, Intron 1	activator	555 to 576bp	F	67.63	55
57	HRAS, c-Ha-Ras	5'-UTR, Intron 1	activator	735 to 851bp	C	79.63	56
58	HSP90AB1, hsp90beta	5'-UTR, Exon 1	repressor	16 to 45bp	HSP	80.95	57
59	HSPA8	5'-UTR, Intron 1	repressor	648 to 675bp	HSP	70.91	4

60	IBRDC2, p53RFP	Promoter	activator	-168 to -149bp	C	74.51	58
61	IER3, IEX-1	Promoter	repressor	-247 to -226bp	A	77.27	59
62	IGFBP3		activator				60
62	IGFBP3	Intron 2	activator	4090 to 4109bp	R-	77.64	60
62	IGFBP3	Intron 1	activator	3170 to 3190bp	R-	78.69	60
63	IRF5	Exon 2, CDS	activator	4007 to 4028bp	CytoR	84.55	61
64	KRT8, CK8	5'-UTR, Exon 1	activator	30 to 51bp	CytoS	63.36	62
65	LGALS3, galectin-3	Intron 2	repressor	8239 to 8263bp	A	74.97	63
66	LIF	Intron 1	activator	873 to 891bp	CytoR	80.9	64
67	LRDD, PIDD	5'-UTR, Exon 2	activator	804 to 831bp	A	90.45	65
68	MAD1L1, MAD1	Promoter	repressor	-316 to -297bp	C	47.36	66
69	mdm2	5'-UTR, Intron 1	activator	762 to 781bp	F-	70.03	67
69	mdm2	5'-UTR, Intron 1	activator	724 to 743bp	F-	77.32	67
70	MET	Promoter	activator	-232 to -199bp	C, R+	67.42	68
71	MLH1	Intron 1	activator	269 to 289bp	DNA-R	87.36	69
72	MMP2	Promoter	activator	-1645 to -1626bp	EMC	89.83	70
73	MSH2	Promoter	activator	-173 to -153bp	DNA-R	71.85	71
73	MSH2	Promoter	activator	-378 to -346bp	DNA-R	68.75	72
74	NDRG1	Promoter	activator	-373 to -342bp	A	65.88	73
75	NLRC4, Ipaf	Promoter	activator	-169 to -150bp	A	67.51	74
76	NOS3	5'-UTR, Intron 1	repressor	2575 to 2597bp	CytoR	72.37	75
77	ODC1	Promoter	repressor	-334 to -310bp	C	73.5	4
77	ODC1	5'-UTR, Intron 1	repressor	585 to 614bp	C	73.55	4
78	P2RXL1	Downstream (1631)	activator	15281 to 15302bp	CNS	78.99	76
79	P53AIP1	5'-UTR, Intron 1	activator	2002 to 2021bp	A	73.6	77
80	PCBP4, MCG10	Promoter	activator	-891 to -870bp	A	70.04	78
80	PCBP4, MCG10	Promoter	activator	-1852 to -1824bp	A	63.97	78
81	PCNA	5'-UTR, Intron 1	activator	6428 to 6447bp	C, DNA-R	77.17	79
82	PERP	Intron 1	activator	3361 to 3380bp	A	84	80
83	PLAGL1, ZAC	Promoter	activator	-861 to -842bp	C, F-	73.58	81
84	PLK2, SNK	Promoter	activator	-2258 to -2236bp	C	75.96	82
84	PLK2, SNK	Promoter	activator	-1303 to -1281bp	C	73.01	82
84	PLK2, SNK	Promoter	repressor	-2033 to -2014bp	C	93.13	82
85	PLK3	Promoter	activator	-439 to -414bp	C	73.15	19
86	PML	Intron 1	activator	643 to 670bp	T, S, A	85.42	83
87	PMS2	Intron 1	activator	2977 to 2998bp	DNA-R	50.66	69

88	PPM1J, MGC19531	Downstream (6082)	activator	11355 to 11374bp	?	92.48	41
89	PRDM1, BLIMP1	Promoter	activator	-356 to -337bp	CytoR	87.21	84
90	PRKAB1, AMPKbeta1	5'-UTR, Exon 1	activator	65 to 84bp	F-	74.37	19
91	PTEN	Promoter	activator	-117 to -84bp	A	93.98	85
92	PTK2, FAK	Promoter	repressor	-968 to -960bp	C, R	-18.5	86
93	PYCARD, ASC	Promoter	activator	-80 to -59bp	A	79.38	87
94	RABGGTA	5'-UTR, Exon 1	activator	226 to 253bp	?	66.72	19
95	RB1	5'-UTR, Exon 1	activator	59 to 82bp	C	73.47	88
96	RFWD2, COP1	Promoter	activator	-2198 to -2177bp	F-	75.83	89
97	RPS27L	Intron 1	activator	223 to 242bp	?	81.59	41
98	RRM2B, p53R2	Intron 1	activator	2259 to 2278bp	DNA-R	91.36	90
99	S100A2	Promoter	activator	-1850 to -1831bp	C	82.35	91
100	SCARA3, CSR1	Intron 2	unknown	17074 to 17093bp	DNA-R	87.81	92
101	SCD	Promoter	repressor	-199 to -179bp	ECM	78.12	4
102	SCN3B	Promoter	activator	-9137 to -9118bp	A	75.77	93
102	SCN3B	Intron 3	activator	13595 to 13614bp	A	77.54	93
103	SERPINB5, maspin	Promoter	activator	-224 to -204bp	ECM	64.63	94
104	SERPINE1	Promoter	activator	-226 to -207bp	ECM	82.89	95
105	SESN1, PA26	Intron 1	activator	511 to 530bp	C, S	77.67	96
106	SFN, 14-3-3sigma	Promoter	activator	-1812 to -1792bp	C	77.49	97
107	SH2D1A, SAP	Promoter	activator	-1884 to -1860bp	C, CytoR	70.91	98
107	SH2D1A, SAP	Promoter	activator	-1894 to -1876bp	C, CytoR	72.95	98
107	SH2D1A, SAP	Promoter	activator	-1909 to -1885bp	C, CytoR	66.65	98
108	SLC38A2	Downstream (532)	repressor	15079 to 15108bp	?	75.78	4
109	STEAP3, TSAP6	5'-UTR, Intron 1	activator	21225 to 21246bp	ECM, E	87.66	99
110	TAP1	Exon 1, CDS	activator	643 to 668bp	R	89.35	100
111	TGFA	Promoter	activator	-84 to -65bp	C, R	77.98	101
112	TNFRSF10A, DR4	Intron 1	activator	479 to 498bp	A	77.36	102
113	TNFRSF10B, DR5	Intron 1	activator	538 to 557bp	A	86.85	103
114	TNFRSF10C, DcR1	Intron 1	activator	369 to 388bp	A	83.07	104
115	TNFRSF10D, DcR2	Intron 1	activator	351 to 370bp	A	82.02	104
116	TP53, p53	Promoter, 5'-UTR, Exon 1	activator	-12 to 7bp	A, C, S, DNA-R, F+	66.94	105
117	TP53i3, Pig3	5'-UTR, Exon 1	activator	441 to 515bp	DNA-R	66.29	106
118	TP53INP1	Intron 3	activator	10562 to 10581bp	A	73.72	107
119	TP63, TP73L	Promoter	activator	-756 to -734bp	R-	76.02	108
120	TP73, p73	Promoter	activator	-2630 to -2603bp	R-	73.37	109

120	TP73, p73	Promoter	activator	-2612 to -2582bp	R-	68.78	109
121	Tp73:Delta	Promoter	activator	-75 to -45bp	R-	84.87	110
122	TRIAP1, p53CSV	Exon 1, CDS	activator	56 to 75bp	A	76.63	111
123	TRIM22, Staf50	5'-UTR, Intron 1	activator	694 to 713bp	DNA-R	80.91	112
124	TRPM2	Promoter	repressor	-2251 to -2227bp	CNS, C	81.77	4
124	TRPM2	Promoter	repressor	-1878 to -1846bp	CNS, C	82.07	4
124	TRPM2	Promoter	repressor	-2246 to -2227bp	CNS, C	74.96	4
125	TSC2	Intron 11	activator	13579 to 13599bp	R-	84.19	113
125	TSC2	Intron 2	activator	3921 to 3952bp	R-	71.77	113
125	TSC2	Intron 2	activator	2579 to 2598bp	R-	80.62	113
126	TYRP1, TRP-1	Promoter	activator	-122 to -100bp	protective	59.86	114
126	TYRP1, TRP-1	Promoter	activator	-108 to -77bp	protective	54.39	114
126	TYRP1, TRP-1	Promoter	activator	-75 to -56bp	protective	61.9	114
126	TYRP1, TRP-1	Promoter	activator	-134 to -113bp	protective	73.8	114
126	TYRP1, TRP-1	Promoter	activator	-85 to -66bp	protective	60.42	114
127	UBD, FAT10	Promoter	repressor	-239 to -220bp	A	59.67	115
128	VCAN, CSPG2	5'-UTR, Intron 1	activator	684 to 704bp	C	87.31	116
129	VDR	5'-UTR, Intron 1	activator	4720 to 4739bp	C, A	73.09	117
129	VDR	5'-UTR, Intron 1	activator	4707 to 4729bp	C, A	55.95	117

*This table provides additional information on the gene set found in Supplementary information S1 (table). This table provides the relative locations in the gene, the regulation type, the distances to the transcription start site (TSS), the gene functions, the Profile Hidden Markov Model (PHMM) score and the references. The PHMM scores are normalized by the highest possible score (such that the highest possible score is 100). The HG17 release of the human genome sequence was employed to deduce the distances from the TSS. Functions are as follows: A = apoptosis, C = cell cycle control, S = senescence, CytoS = cytoskeleton, E = endosome and exosome compartment, ECM = extracellular matrix, F+/- = positive/negative feedback loops for p53, R+/- = regulation by p53 upon other signal transduction pathways, T = transcription and translation, DNA-R = DNA repair, CytoR = cytokine and inflammatory regulator, CNS = central nervous system regulator, GR = growth factor regulator, HSP = heat shock protein.

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