

Table S1 The characteristic of 92 target genes

No.	Target	Symbol	Entrez ID
1	72 kDa type IV collagenase	<i>MMP2</i>	4313
2	Endothelin-1	<i>EDN1</i>	1906
3	Heat shock protein beta-1	<i>HSPB1</i>	3315
4	G2/mitotic-specific cyclin-B1	<i>CCNB1</i>	891
5	Hepatocyte growth factor receptor	<i>MET</i>	4233
6	Amine oxidase [flavin-containing] A	<i>MAOA</i>	4128
7	26S proteasome non-ATPase regulatory subunit 3	<i>PSMD3</i>	5709
8	Nucleophosmin	<i>NPM1</i>	4869
9	Coagulation factor VII	<i>F7</i>	2155
10	C-reactive protein	<i>CRP</i>	1401
11	Glutathione S-transferase P	<i>GSTP1</i>	2950
12	Aryl hydrocarbon receptor	<i>AHR</i>	196
13	Nuclear factor erythroid 2-related factor 2	<i>NFE2L2</i>	4780
14	Tumor necrosis factor	<i>TNF</i>	7124
15	Pro-epidermal growth factor	<i>EGF</i>	1950
16	Osteopontin	<i>SPP1</i>	6696
17	Prostaglandin G/H synthase 2	<i>PTGS2</i>	5743
18	Neutrophil cytosol factor 1	<i>NCF1</i>	653361
19	G1/S-specific cyclin-D1	<i>CCND1</i>	595
20	ATP-citrate synthase	<i>ACLY</i>	47
21	Estrogen receptor	<i>ESR1</i>	2099
22	Vascular endothelial growth factor A	<i>VEGFA</i>	7422
23	Transforming growth factor beta-1	<i>TGFB1</i>	7040
24	Myc proto-oncogene protein	<i>MYC</i>	4609
25	Cyclin-A2	<i>CCNA2</i>	890
26	Gamma-aminobutyric acid receptor subunit alpha-1	<i>GABRA1</i>	2554
27	Glutathione S-transferase Mu 1	<i>GSTM1</i>	2944
28	Mitogen-activated protein kinase 1	<i>MAPK1</i>	5594
29	Tissue-type plasminogen activator	<i>PLAT</i>	5327
30	E3 ubiquitin-protein ligase Mdm2	<i>MDM2</i>	4193
31	Matrix metalloproteinase-9	<i>MMP9</i>	4318
32	Epidermal growth factor receptor	<i>EGFR</i>	1956
33	Superoxide dismutase [Cu-Zn]	<i>SOD1</i>	6647
34	Receptor tyrosine-protein kinase erbB-2	<i>ERBB2</i>	2064
35	Interleukin-4	<i>IL4</i>	3565
36	Glucose-6-phosphate 1-dehydrogenase	<i>G6PD</i>	2539
37	Mitogen-activated protein kinase 8	<i>MAPK8</i>	5599
38	Coagulation factor Xa	<i>F10</i>	2159
39	Heat shock protein HSP 90	<i>HSP90AB1</i>	3326
40	Serine/threonine-protein kinase Chk2	<i>CHEK2</i>	11200
41	Trifunctional enzyme subunit beta, mitochondrial	<i>HADHB</i>	3032
42	Cell division protein kinase 2	<i>CDK2</i>	1017
43	Runt-related transcription factor 2	<i>RUNX2</i>	860
44	Progesterone receptor	<i>PGR</i>	5241
45	Cellular tumor antigen p53	<i>TP53</i>	7157
46	Caspase-9	<i>CASP9</i>	842
47	Cyclin-dependent kinase inhibitor 1	<i>CDKN1A</i>	1026
48	Catalase	<i>CAT</i>	847
49	Interleukin-1 beta	<i>IL1B</i>	3553

Table S1 (continued)

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No.	Target	Symbol	Entrez ID
50	DNA topoisomerase II	<i>TOP2B</i>	7155
51	Insulin-like growth factor-binding protein 3	<i>IGFBP3</i>	3486
52	Calmodulin	<i>CALM1</i>	801
53	Eukaryotic translation initiation factor 6	<i>EIF6</i>	3692
54	Phosphatidylinositol-3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN	<i>PTEN</i>	5728
55	Fatty acid synthase	<i>FASN</i>	2194
56	Retinoic acid receptor RXR-alpha	<i>RXRA</i>	6256
57	Acetyl-CoA carboxylase 1	<i>ACACA</i>	31
58	Serine/threonine-protein kinase Chk1	<i>CHEK1</i>	1111
59	Peroxisomal acyl-coenzyme A oxidase 1	<i>ACOX1</i>	51
60	Caspase-8	<i>CASP8</i>	841
61	Amyloid beta A4 protein	<i>APP</i>	351
62	DNA topoisomerase 1	<i>TOP1</i>	7150
63	Proto-oncogene serine/threonine-protein kinase Pim-1	<i>PIM1</i>	5292
64	Mitogen-activated protein kinase 14	<i>MAPK14</i>	1432
65	RAF proto-oncogene serine/threonine-protein kinase	<i>RAF1</i>	5894
66	Proliferating cell nuclear antigen	<i>PCNA</i>	5111
67	Antileukoproteinase	<i>SLPI</i>	6590
68	Cell division control protein 2 homolog	<i>CDC42</i>	998
69	Beta-2 adrenergic receptor	<i>ADRB2</i>	154
70	Cathepsin D	<i>CTSD</i>	1509
71	Induced myeloid leukemia cell differentiation protein Mcl-1	<i>MCL1</i>	4170
72	C-C motif chemokine 2	<i>CCL2</i>	6347
73	Interleukin-6	<i>IL6</i>	3569
74	Caspase-3	<i>CASP3</i>	836
75	Poly [ADP-ribose] polymerase 1	<i>PARP1</i>	142
76	Vascular endothelial growth factor receptor 2	<i>KDR</i>	3791
77	Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit, gamma isoform	<i>PIK3CG</i>	5294
78	Proto-oncogene c-Fos	<i>FOS</i>	2353
79	Interferon gamma	<i>IFNG</i>	3458
80	78 kDa glucose-regulated protein	<i>HSPA5</i>	3309
81	Hexokinase-2	<i>HK2</i>	3099
82	DNA topoisomerase 2-alpha	<i>TOP2A</i>	7153
83	Caveolin-1	<i>CAV1</i>	857
84	Carbonic anhydrase II	<i>CA2</i>	760
85	Hypoxia-inducible factor 1-alpha	<i>HIF1A</i>	3091
86	Heat shock factor protein 1	<i>HSF1</i>	3297
87	RAC-alpha serine/threonine-protein kinase	<i>AKT1</i>	207
88	Cytochrome P450 2B6	<i>CYP2B6</i>	1555
89	Glycogen phosphorylase, muscle form	<i>PYGM</i>	5837
90	Transcription factor AP-1	<i>JUN</i>	3725
91	Androgen receptor	<i>AR</i>	367
92	Protein kinase C alpha type	<i>PRKCA</i>	5578

Table S2 The enrichment of KEGG pathway

ID	Description	P adjust	Count
hsa05418	Fluid shear stress and atherosclerosis	2.96E-19	23
hsa05205	Proteoglycans in cancer	7.97E-17	24
hsa05417	Lipid and atherosclerosis	1.65E-16	24
hsa05215	Prostate cancer	3.54E-16	18
hsa04933	AGE-RAGE signaling pathway in diabetic complications	5.04E-16	18
hsa05161	Hepatitis B	6.80E-16	21
hsa05219	Bladder cancer	5.47E-15	13
hsa04657	IL-17 signaling pathway	6.19E-14	16
hsa04218	Cellular senescence	6.19E-14	19
hsa01522	Endocrine resistance	9.92E-14	16
hsa05167	Kaposi sarcoma-associated herpesvirus infection	2.24E-13	20
hsa05210	Colorectal cancer	2.31E-13	15
hsa05163	Human cytomegalovirus infection	2.77E-13	21
hsa04151	PI3K-AKT signaling pathway	3.49E-13	25
hsa05212	Pancreatic cancer	6.88E-13	14
hsa05207	Chemical carcinogenesis—receptor activation	8.57E-13	20
hsa04010	MAPK signaling pathway	4.46E-12	22
hsa04068	FoxO signaling pathway	6.09E-12	16
hsa05223	Non-small cell lung cancer	6.21E-12	13
hsa01524	Platinum drug resistance	6.77E-12	13
hsa04115	p53 signaling pathway	6.77E-12	13
hsa04668	TNF signaling pathway	7.27E-12	15
hsa05213	Endometrial cancer	7.70E-12	12
hsa05208	Chemical carcinogenesis—reactive oxygen species	1.69E-11	19
hsa04659	Th17 cell differentiation	6.38E-11	14
hsa05160	Hepatitis C	7.05E-11	16
hsa05230	Central carbon metabolism in cancer	7.05E-11	12
hsa05214	Glioma	1.60E-10	12
hsa04370	VEGF signaling pathway	1.98E-10	11
hsa04510	Focal adhesion	2.65E-10	17
hsa01521	EGFR tyrosine kinase inhibitor resistance	2.69E-10	12
hsa05169	Epstein-Barr virus infection	2.69E-10	17
hsa05224	Breast cancer	2.71E-10	15
hsa05142	Chagas disease	3.53E-10	13
hsa04625	C-type lectin receptor signaling pathway	4.41E-10	13
hsa04926	Relaxin signaling pathway	5.16E-10	14
hsa04066	HIF-1 signaling pathway	7.63E-10	13
hsa04210	Apoptosis	9.89E-10	14
hsa05166	Human T-cell leukemia virus 1 infection	9.89E-10	17
hsa05218	Melanoma	1.39E-09	11
hsa05225	Hepatocellular carcinoma	1.48E-09	15
hsa05140	Leishmaniasis	2.79E-09	11
hsa05226	Gastric cancer	3.03E-09	14
hsa05152	Tuberculosis	3.67E-09	15
hsa04012	ErbB signaling pathway	7.77E-09	11
hsa05165	Human papillomavirus infection	8.49E-09	19
hsa04915	Estrogen signaling pathway	1.18E-08	13
hsa05235	PD-L1 expression and PD-1 checkpoint pathway in cancer	1.20E-08	11
hsa05211	Renal cell carcinoma	1.35E-08	10

Table S2 (continued)

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ID	Description	P adjust	Count
hsa05222	Small cell lung cancer	1.66E-08	11
hsa05206	MicroRNAs in cancer	1.85E-08	18
hsa04919	Thyroid hormone signaling pathway	2.58E-08	12
hsa05170	Human immunodeficiency virus 1 infection	2.96E-08	15
hsa05133	Pertussis	3.23E-08	10
hsa05132	Salmonella infection	3.37E-08	16
hsa04110	Cell cycle	3.82E-08	12
hsa04932	Non-alcoholic fatty liver disease	4.06E-08	13
hsa04620	Toll-like receptor signaling pathway	5.24E-08	11
hsa04660	T cell receptor signaling pathway	5.24E-08	11
hsa05162	Measles	1.09E-07	12
hsa05145	Toxoplasmosis	1.11E-07	11
hsa04936	Alcoholic liver disease	1.34E-07	12
hsa04912	GnRH signaling pathway	2.02E-07	10
hsa05231	Choline metabolism in cancer	3.30E-07	10
hsa05220	Chronic myeloid leukemia	4.08E-07	9
hsa04380	Osteoclast differentiation	4.14E-07	11
hsa04914	Progesterone-mediated oocyte maturation	4.62E-07	10
hsa04630	JAK-STAT signaling pathway	5.30E-07	12
hsa05135	Yersinia infection	7.97E-07	11
hsa05164	Influenza A	9.31E-07	12
hsa04071	Sphingolipid signaling pathway	1.88E-06	10
hsa04664	Fc epsilon RI signaling pathway	2.07E-06	8
hsa05323	Rheumatoid arthritis	2.11E-06	9
hsa04921	Oxytocin signaling pathway	2.43E-06	11
hsa04917	Prolactin signaling pathway	2.49E-06	8
hsa05144	Malaria	3.09E-06	7
hsa05202	Transcriptional misregulation in cancer	3.12E-06	12
hsa05130	Pathogenic Escherichia coli infection	3.84E-06	12
hsa05415	Diabetic cardiomyopathy	5.21E-06	12
hsa05203	Viral carcinogenesis	5.42E-06	12
hsa05134	Legionellosis	7.17E-06	7
hsa04015	Rap1 signaling pathway	7.17E-06	12
hsa05216	Thyroid cancer	7.29E-06	6
hsa05022	Pathways of neurodegeneration—multiple diseases	7.38E-06	18
hsa04722	Neurotrophin signaling pathway	1.45E-05	9
hsa05321	Inflammatory bowel disease	1.67E-05	7
hsa05020	Prion disease	1.87E-05	13
hsa04014	Ras signaling pathway	1.88E-05	12
hsa05221	Acute myeloid leukemia	1.98E-05	7
hsa05120	Epithelial cell signaling in Helicobacter pylori infection	2.63E-05	7
hsa05131	Shigellosis	3.44E-05	12
hsa05146	Amoebiasis	3.57E-05	8
hsa04910	Insulin signaling pathway	4.20E-05	9
hsa04928	Parathyroid hormone synthesis, secretion and action	4.63E-05	8
hsa04621	NOD-like receptor signaling pathway	7.12E-05	10
hsa05171	Coronavirus disease—COVID-19	9.69E-05	11
hsa04935	Growth hormone synthesis, secretion and action	0.0001042	8
hsa05143	African trypanosomiasis	0.00011303	5

Table S2 (continued)

Table S2 (*continued*)

ID	Description	P adjust	Count
hsa05010	Alzheimer disease	0.00014298	14
hsa04658	Th1 and Th2 cell differentiation	0.00014298	7
hsa04371	Apelin signaling pathway	0.00030145	8
hsa04024	cAMP signaling pathway	0.00031191	10
hsa04726	Serotonergic synapse	0.00056822	7
hsa04217	Necroptosis	0.00073938	8
hsa04215	Apoptosis—multiple species	0.0008788	4
hsa05416	Viral myocarditis	0.00107734	5
hsa04114	Oocyte meiosis	0.00121218	7
hsa04728	Dopaminergic synapse	0.00125723	7
hsa05012	Parkinson disease	0.00129834	10
hsa04666	Fc gamma R-mediated phagocytosis	0.00138848	6
hsa04929	GnRH secretion	0.00138848	5
hsa04140	Autophagy—animal	0.00179769	7
hsa05031	Amphetamine addiction	0.0019272	5
hsa04520	Adherens junction	0.00217601	5
hsa05332	Graft-versus-host disease	0.00230043	4
hsa04072	Phospholipase D signaling pathway	0.00230668	7
hsa04931	Insulin resistance	0.00230668	6
hsa04020	Calcium signaling pathway	0.00233635	9
hsa04261	Adrenergic signaling in cardiomyocytes	0.00243522	7
hsa04670	Leukocyte transendothelial migration	0.00297704	6
hsa04930	Type II diabetes mellitus	0.00308462	4
hsa04662	B cell receptor signaling pathway	0.00388347	5
hsa04540	Gap junction	0.00525788	5
hsa04650	Natural killer cell mediated cytotoxicity	0.00583545	6
hsa01212	Fatty acid metabolism	0.00660534	4
hsa04350	TGF-beta signaling pathway	0.00683758	5
hsa01523	Antifolate resistance	0.00801762	3
hsa04750	Inflammatory mediator regulation of TRP channels	0.00805188	5
hsa04062	Chemokine signaling pathway	0.0090168	7
hsa04916	Melanogenesis	0.0090168	5
hsa04723	Retrograde endocannabinoid signaling	0.01006604	6
hsa04720	Long-term potentiation	0.01118607	4
hsa04920	Adipocytokine signaling pathway	0.01228885	4
hsa04934	Cushing syndrome	0.01228885	6
hsa04150	mTOR signaling pathway	0.01257788	6
hsa04622	RIG-I-like receptor signaling pathway	0.01267413	4
hsa04725	Cholinergic synapse	0.01368924	5
hsa00982	Drug metabolism—cytochrome P450	0.01368924	4
hsa04137	Mitophagy—animal	0.01368924	4
hsa05330	Allograft rejection	0.01420334	3
hsa04022	cGMP-PKG signaling pathway	0.01649169	6
hsa04310	Wnt signaling pathway	0.01649169	6
hsa04152	AMPK signaling pathway	0.01681879	5
hsa04530	Tight junction	0.01719022	6
hsa04612	Antigen processing and presentation	0.01732862	4
hsa04940	Type I diabetes mellitus	0.01916873	3
hsa04270	Vascular smooth muscle contraction	0.0254987	5

Table S2 (*continued*)

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ID	Description	P adjust	Count
hsa04672	Intestinal immune network for IgA production	0.02690986	3
hsa00061	Fatty acid biosynthesis	0.02690986	2
hsa05410	Hypertrophic cardiomyopathy	0.0272249	4
hsa05014	Amyotrophic lateral sclerosis	0.02754301	9
hsa04613	Neutrophil extracellular trap formation	0.02778173	6
hsa04550	Signaling pathways regulating pluripotency of stem cells	0.03160967	5
hsa04713	Circadian entrainment	0.03398029	4
hsa04640	Hematopoietic cell lineage	0.03609246	4
hsa04923	Regulation of lipolysis in adipocytes	0.03645955	3
hsa00480	Glutathione metabolism	0.03971206	3
hsa04064	NF-kappa B signaling pathway	0.04154088	4
hsa04730	Long-term depression	0.04282644	3
hsa04922	Glucagon signaling pathway	0.04494125	4
hsa04213	Longevity regulating pathway—multiple species	0.04603393	3

KEGG, Kyoto Encyclopedia of Genes and Genomes.