

Category	Term	Count	%	PValue	Genes	List Total	Pop Hits	Pop Total	Fold Enrichment	Bonferroni	Benjamini	FDR
GOTERM_MF_DIRECT	enzyme binding	25	25.5102041	4.70E-20	PTEN, CYP3A4, PTGS2, EGFR, PPP3CA, MAPK8, RXRA, CCND1, AKT1, HMOX1, PTPN1, JUN, TGFB1, GSTM1, HSPA5, STAT1, CAV1, PRKCA, MADK14 ESR1 SIRT1 CXCL10	98	333	16881	12.9320647	1.86E-17	1.86E-17	1.70E-17
GOTERM_MF_DIRECT	protein binding	82	83.6734694	7.42E-11	CHRM3, GSK3B, CDKN1A, CXCL8, SERPINE1, PTEN, HSPB1, AHR, SLC2A4, ELK1, TNF, SLC6A3, SLC6A4, ICAM1, CASP9, IKBKB, THBD, PPP3CA, IGHG1, CASP8, CCND1, PLAUI, MYC, CASP3, AKT1, CTSD, HSP90AA1, CHUK, IGFBP3, MMP2, AHS1, PRKCA, FOS, OPRM1, F2, MMP9, F3, SIRT1, IL1A, IRF1, BIRC5, PPARG, PPARA, TP53, PPARD, CRP, OPRD1, NR1I2, ADRB1, ADRB2, PTGS2, ACACA, EGFR, RELA, DPP4, MAPK8, RXRA, SPP1, HMOX1, DRD1, LDLR, PTPN1, NQO1, JUN, TGFB1, NOS2, HSPA5, STAT1, INSR, CAV1, MADK14 SELE ESR1 SOD1 CXCL10	98	8785	16881	1.607845	2.93E-08	1.47E-08	1.34E-08
GOTERM_MF_DIRECT	identical protein binding	23	23.4693878	1.88E-10	NQO1, JUN, HSP90AA1, STAT1, CAV1, PTEN, HSPB1, ESR1, SIRT1, TNF, MMP9, EGFR, RELA, SOD1, DPP4, CASP8 BCL2 BAX BIRC5 AKT1	98	749	16881	5.28954252	7.42E-08	2.47E-08	2.27E-08
GOTERM_MF_DIRECT	RNA polymerase II transcription factor activity, ligand-activated sequence-specific DNA	8	8.16326531	1.21E-09	RXRA, NR1I3, NR1I2, PPARG, AHR, PPARA, ESR1, PPARD	98	36	16881	38.2789116	4.78E-07	1.19E-07	1.09E-07

GOTER M_MF_ DIRECT	protein heterodim erization activity	17	17.3469388	8.68E-09	JUN, TGFB1, CHUK, CAV1, ADRB1, AHR, FOS, EGFR, RELA, IKBKB, PPP3CA, RXRA, BCL2, BAX, BIRC5, TP53, PPARD	98	465	16881	6.29749835	3.43E-06	6.86E-07	6.29E-07
GOTER M_MF_ DIRECT	protein homodim erization activity	20	20.4081633	2.80E-08	JUN, HSP90AA1, TGFB1, GSTM1, NOS2, CHUK, STAT1, PON1, ADRB2, PTGS2, RELA, SLC6A4, SOD1, DPP4, IKBKB, BCL2, BAX, BIRC5, HMOX1	98	730	16881	4.71931786	1.11E-05	1.84E-06	1.69E-06
GOTER M_MF_ DIRECT	transcripti on factor binding	13	13.2653061	8.14E-08	JUN, AHR, FOS, ESR1, SIRT1, RELA, CCND1, MYC, BCL2, PPARG, PPARA, TP53, PPARD	98	284	16881	7.88491664	3.22E-05	4.60E-06	4.21E-06
GOTER M_MF_ DIRECT	protease binding	9	9.18367347	1.16E-07	DPP4, CASP3, SERPINE1, BCL2, TNF, TP53, F3, LDLR, SLC6A3	98	101	16881	15.3494645	4.56E-05	5.71E-06	5.23E-06
GOTER M_MF_ DIRECT	drug binding	8	8.16326531	2.63E-07	PPP3CA, CHRM3, NR1I2, PPARG, HTR2A, PPARA, SLC6A3, PPARD	98	76	16881	18.132116	1.04E-04	1.15E-05	1.06E-05
GOTER M_MF_ DIRECT	protein phosphata se 2A binding	6	6.12244898	4.12E-07	PTPN1, STAT1, BCL2, AKT1, TP53, SLC6A3	98	27	16881	38.2789116	1.63E-04	1.63E-05	1.49E-05
GOTER M_MF_ DIRECT	steroid hormone receptor activity	7	7.14285714	7.93E-07	RXRA, NR1I3, NR1I2, PPARG, PPARA, ESR1, PPARD	98	56	16881	21.5318878	3.13E-04	2.85E-05	2.61E-05
GOTER M_MF_ DIRECT	sequence- specific DNA binding	15	15.3061224	1.49E-06	JUN, NR1I3, NR1I2, FOS, ELK1, ESR1, RXRA, MYC, IRF1, BCL2, PPARG, PPARA, TP53, NFE2L2, PPARD	98	518	16881	4.98808211	5.88E-04	4.90E-05	4.49E-05
GOTER M_MF_ DIRECT	nitric- oxide synthase regulator activity	4	4.08163265	1.01E-05	HSP90AA1, AKT1, ESR1, EGFR	98	8	16881	86.127551	0.00397637	3.06E-04	2.81E-04
GOTER M_MF_ DIRECT	serine- type endopepti dase activity	10	10.2040816	1.60E-05	DPP4, PRSS1, IGHG1, PLAUI, MMP1, MMP2, F2, CTSD, F3, MMP9	98	255	16881	6.75510204	0.00629011	4.51E-04	4.13E-04
GOTER M_MF_ DIRECT	protein complex binding	9	9.18367347	2.45E-05	CDKN1A, CASP8, CCND1, MYC, CASP3, HTR2A, PPARA, RELA, SLC6A3	98	206	16881	7.52570834	0.00962492	6.45E-04	5.91E-04

GOTERM_MF_DIRECT	transcription regulatory region DNA binding	9	9.18367347	3.11E-05	JUN, RXRA, PPARG, FOS, AHR, TNF, TP53, RELA, NFE2L2	98	213	16881	7.27838459	0.01220857	7.68E-04	7.04E-04
GOTERM_MF_DIRECT	protein kinase binding	11	11.2244898	6.00E-05	CASP9, IKBKB, GSK3B, PTPN1, CCND1, CAV1, PTEN, HSPB1, TP53, RELA, EGFR	98	376	16881	5.03937799	0.02340349	0.001393	0.00127662
GOTERM_MF_DIRECT	chaperone binding	6	6.12244898	1.02E-04	HSPA5, BAX, AHSA1, BIRC5, TP53, SOD1	98	81	16881	12.7596372	0.03965482	0.0022478	0.00206001
GOTERM_MF_DIRECT	transcription factor activity, sequence-specific DNA binding	17	17.3469388	1.10E-04	JUN, STAT1, NR1I3, NR1I2, AHR, FOS, ELK1, ESR1, RELA, RXRA, MYC, IRF1, PPARG, PPARA, TP53, NFE2L2, PPARG	98	961	16881	3.04717662	0.04244962	0.00228287	0.00209215
GOTERM_MF_DIRECT	heme binding	7	7.14285714	1.38E-04	NOS2, CYP1A1, CYP1B1, HMOX1, CYP3A4, PTGS2, MPO	98	137	16881	8.80135558	0.05309565	0.00272767	0.00249979
GOTERM_MF_DIRECT	transcriptional activator activity, RNA polymerase II core promoter proximal region sequence-specific	8	8.16326531	4.22E-04	JUN, MYC, IRF1, FOS, PPARA, ELK1, ESR1, RELA	98	236	16881	5.839156	0.15351836	0.00793484	0.00727193
GOTERM_MF_DIRECT	protein phosphatase	5	5.10204082	4.71E-04	HSP90AA1, PPARG, MAPK14, TP53, EGFR	98	63	16881	13.6710398	0.16968946	0.00845053	0.00774454
GOTERM_MF_DIRECT	glycoprotein binding	5	5.10204082	5.30E-04	HSP90AA1, TGFB1, HSPA5, LDLR, EGFR	98	65	16881	13.2503925	0.189028	0.00875619	0.00802466

GOTERM_M_MF_DIRECT	cytokine activity	7	7.14285714	5.32E-04	IL1A, IL6, TGFB1, IFNG, IL1B, SPP1, TNF	98	176	16881	6.85105519	0.18958151	0.00875619	0.00802466
GOTERM_M_MF_DIRECT	RNA polymerase II core promoter proximal region sequence-specific DNA	9	9.18367347	0.00100486	JUN, STAT1, MYC, IRF1, FOS, PPARA, ELK1, ESR1, RELA	98	355	16881	4.36703076	0.32774731	0.01587686	0.01455044
GOTERM_M_MF_DIRECT	protein kinase activity	9	9.18367347	0.00107971	IKBKB, GSK3B, CCND1, CHUK, CCL2, AKT1, PRKCA, MAPK14, EGFR	98	359	16881	4.31837303	0.3473507	0.01640327	0.01503287
GOTERM_M_MF_DIRECT	double-stranded DNA binding	5	5.10204082	0.00121503	STAT1, MYC, ELK1, TP53, EGFR	98	81	16881	10.633031	0.38135907	0.0177755	0.01629046
GOTERM_M_MF_DIRECT	ubiquitin protein ligase binding	8	8.16326531	0.001331	GSK3B, CDKN1A, CASP8, HSPA5, BCL2, TP53, RELA, EGFR	98	287	16881	4.80153595	0.40909108	0.01877654	0.01720787
GOTERM_M_MF_DIRECT	chromatin binding	9	9.18367347	0.00185301	JUN, PPARG, FOS, MPO, ELK1, ESR1, TP53, RELA, EGFR	98	391	16881	3.9649512	0.51935028	0.02523922	0.02313063
GOTERM_M_MF_DIRECT	core promoter sequence-specific DNA binding	4	4.08163265	0.00192141	PPARG, ESR1, SIRT1, TP53	98	43	16881	16.0237304	0.53218795	0.02529862	0.02318506
GOTERM_M_MF_DIRECT	cysteine-type endopeptidase activity involved in apoptotic	3	3.06122449	0.00244594	CASP9, CASP8, CASP3	98	13	16881	39.7511774	0.61990405	0.03116607	0.02856232

GOTER M_MF_ DIRECT	chemokine activity	4	4.08163265	0.00279807	CXCL10, CXCL11, CXCL8, CCL2	98	49	16881	14.061641	0.66938026	0.03453866	0.03165315
GOTER M_MF_ DIRECT	oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen, reduced flavin or flavoprotein as one donor, and incorporation	3	3.06122449	0.00326808	CYP1A1, CYP1B1, CYP3A4	98	15	16881	34.4510204	0.7255549	0.03911788	0.0358498
GOTER M_MF_ DIRECT	receptor binding	8	8.16326531	0.00423487	DPP4, CXCL10, NOS2, CAV1, SERPINE1, CCL2, F2, SLC6A3	98	353	16881	3.90379835	0.81293972	0.04919919	0.04508888
GOTER M_MF_ DIRECT	cysteine-type endopeptidase activity	4	4.08163265	0.00520131	CASP9, CASP8, CASP3, CTSD	98	61	16881	11.2954165	0.87253063	0.0587005	0.05379641
GOTER M_MF_ DIRECT	zinc ion binding	15	15.3061224	0.00681086	PTPN1, MMP1, NR1I3, MMP2, NR1I2, PRKCA, ESR1, MMP9, SOD1, RXRA, BIRC5 PPARG PPARA TP53 PPARD	98	1169	16881	2.21028788	0.93276053	0.07473032	0.06848703
GOTER M_MF_ DIRECT	virus receptor activity	4	4.08163265	0.00762292	DPP4, HTR2A, LDLR, ICAM1	98	70	16881	9.84314869	0.95132486	0.08137978	0.07458096
GOTER M_MF_ DIRECT	aromatase activity	3	3.06122449	0.0104466	CYP1A1, CYP1B1, CYP3A4	98	27	16881	19.1394558	0.98420577	0.10858962	0.09951758

GOTER M_MF_ DIRECT	lipid binding	5	5.10204082	0.01121283	PTEN, BAX, PPARA, PTGS2, PPARD	98	151	16881	5.70381133	0.98836904	0.11316287	0.10370875
GOTER M_MF_ DIRECT	vitamin D 24- hydroxyla se activity	2	2.04081633	0.01145953	CYP1A1, CYP3A4	98	2	16881	172.255102	0.98946077	0.11316287	0.10370875
GOTER M_MF_ DIRECT	tumor necrosis factor receptor binding	3	3.06122449	0.01199401	CASP8, STAT1, TNF	98	29	16881	17.8194933	0.99148798	0.11555208	0.10589836
GOTER M_MF_ DIRECT	kinase activity	6	6.12244898	0.01267021	GSK3B, CDKN1A, MAPK8, PLAU, AKT1, PRKCA	98	241	16881	4.28850876	0.99350491	0.11760962	0.10778401
GOTER M_MF_ DIRECT	NF- kappaB binding	3	3.06122449	0.01280307	GSK3B, RELA, PPARD	98	30	16881	17.2255102	0.99384116	0.11760962	0.10778401
GOTER M_MF_ DIRECT	IkappaB kinase activity	2	2.04081633	0.01714046	IKBKB, CHUK	98	3	16881	114.836735	0.99891825	0.1538746	0.14101925
GOTER M_MF_ DIRECT	protein N- terminus	4	4.08163265	0.01837868	TGFB1, TP53, RELA, SLC6A3	98	97	16881	7.10330318	0.99934254	0.16132399	0.14784629
GOTER M_MF_ DIRECT	histone deacetyla se	4	4.08163265	0.02096991	HSP90AA1, MAPK8, CCND1, RELA	98	102	16881	6.75510204	0.99976856	0.18006775	0.16502411
GOTER M_MF_ DIRECT	integrin binding	4	4.08163265	0.02261607	COL3A1, VCAM1, EGFR, ICAM1	98	105	16881	6.56209913	0.99988094	0.18370789	0.16836014
GOTER M_MF_ DIRECT	BH3 domain binding	2	2.04081633	0.02278908	BCL2, BAX	98	4	16881	86.127551	0.99988898	0.18370789	0.16836014
GOTER M_MF_ DIRECT	norepinep hrine binding	2	2.04081633	0.02278908	ADRB1, ADRB2	98	4	16881	86.127551	0.99988898	0.18370789	0.16836014
GOTER M_MF_ DIRECT	CXCR3 chemokin e receptor binding	2	2.04081633	0.02840557	CXCL10, CXCL11	98	5	16881	68.9020408	0.99998861	0.21577306	0.19774645

GOTERM_MF_DIRECT	superoxide dismutase activity	2	2.04081633	0.02840557	NQO1, SOD1	98	5	16881	68.9020408	0.99998861	0.21577306	0.19774645
GOTERM_MF_DIRECT	NFAT protein binding	2	2.04081633	0.02840557	MAPK14, PPARA	98	5	16881	68.9020408	0.99998861	0.21577306	0.19774645
GOTERM_MF_DIRECT	oxygen binding	3	3.06122449	0.02987658	CYP1A1, CYP1B1, CYP3A4	98	47	16881	10.9950065	0.99999374	0.21854164	0.20028373
GOTERM_MF_DIRECT	RNA polymerase II transcription factor activity	3	3.06122449	0.02987658	GSK3B, ELK1, TP53	98	47	16881	10.9950065	0.99999374	0.21854164	0.20028373
GOTERM_MF_DIRECT	scaffold protein binding	3	3.06122449	0.03106088	IKBKB, CASP8, CHUK	98	48	16881	10.7659439	0.99999614	0.22140206	0.20290518
GOTERM_MF_DIRECT	protein domain specific binding	5	5.10204082	0.03194916	HSPA5, IL1B, OPRM1, PPARA, NFE2L2	98	208	16881	4.14074765	0.99999731	0.22140206	0.20290518
GOTERM_MF_DIRECT	RNA polymerase II regulatory region sequence-specific DNA	5	5.10204082	0.03194916	RXRA, NR1I3, NR1I2, TP53, RELA	98	208	16881	4.14074765	0.99999731	0.22140206	0.20290518
GOTERM_MF_DIRECT	epinephrine binding	2	2.04081633	0.0339901	ADRB1, ADRB2	98	6	16881	57.4183673	0.99999883	0.23148433	0.21214514
GOTERM_MF_DIRECT	monoamine transmembrane transporter activity	2	2.04081633	0.03954287	SLC6A3, SLC6A4	98	7	16881	49.2157434	0.99999988	0.26473618	0.24261898

GOTERM_MF_DIRECT	copper ion binding	3	3.06122449	0.04117632	IL1A, TP53, SOD1	98	56	16881	9.2279519	0.99999994	0.27107745	0.24843048
GOTERM_MF_DIRECT	monooxygenase activity	3	3.06122449	0.04387454	CYP1A1, CYP1B1, CYP3A4	98	58	16881	8.90974666	0.99999998	0.28254444	0.25893946
GOTERM_MF_DIRECT	insulin-like growth factor II binding	2	2.04081633	0.04506405	INSR, IGFBP3	98	8	16881	43.0637755	0.99999999	0.28254444	0.25893946
GOTERM_MF_DIRECT	thyroid hormone receptor activity	2	2.04081633	0.04506405	NR1I3, NR1I2	98	8	16881	43.0637755	0.99999999	0.28254444	0.25893946