

RT² Profiler PCR Array (384-Well Format)

Human Apoptosis 384HT

Cat. no. 330231 PAHS-3012ZE

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format E	Applied Biosystems® models 7900HT (384-well block), ViiA™ 7 (384-well block); Bio-Rad CFX384™
RT ² Profiler PCR Array, Format G	Roche® LightCycler® 480 (384-well block)

Description

The Human Apoptosis RT² Profiler PCR Array profiles the expression of 370 key genes involved in apoptosis, or programmed cell death. The array includes the TNF ligands and their receptors; members of the bcl-2 family, BIR (baculoviral IAP repeat) domain proteins, CARD domain (caspase recruitment domain) proteins, death domain proteins, TRAF (TNF receptor-associated factor) domain proteins and caspases. These 370 genes are also grouped by their functional contribution to apoptosis, either anti-apoptosis or induction of apoptosis. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to apoptosis with this array.

For further details, consult the *RT² Profiler PCR Array Handbook*.



Sample & Assay Technologies

Shipping and storage

RT² Profiler PCR Arrays in formats E and G are shipped at ambient temperature, on dry ice, or blue ice packs depending on destination and accompanying products.

For long term storage, keep plates at -20°C.

Note: Ensure that you have the correct RT² Profiler PCR Array format for your real-time cycler (see table above).

Note: Open the package and store the products appropriately immediately on receipt.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.195740	NM_012138	AATF	Apoptosis antagonizing transcription factor
A02	Hs.431048	NM_005157	ABL1	C-abl oncogene 1, non-receptor tyrosine kinase
A03	Hs.438918	NM_004302	ACVR1B	Activin A receptor, type IB
A04	Hs.77867	NM_000674	ADORA1	Adenosine A1 receptor
A05	Hs.424932	NM_004208	AIFM1	Apoptosis-inducing factor, mitochondrion-associated, 1
A06	Hs.655377	NM_032797	AIFM2	Apoptosis-inducing factor, mitochondrion-associated, 2
A07	Hs.163543	NM_144704	AIFM3	Apoptosis-inducing factor, mitochondrion-associated, 3
A08	Hs.525622	NM_005163	AKT1	V-akt murine thymoma viral oncogene homolog 1
A09	Hs.654431	NM_000697	ALOX12	Arachidonate 12-lipoxygenase
A10	Hs.111256	NM_001141	ALOX15B	Arachidonate 15-lipoxygenase, type B
A11	Hs.494173	NM_000700	ANXA1	Annexin A1
A12	Hs.422986	NM_001153	ANXA4	Annexin A4
A13	Hs.728891	NM_001160	APAF1	Apoptotic peptidase activating factor 1
A14	Hs.435771	NM_006595	API5	Apoptosis inhibitor 5
A15	Hs.654439	NM_000041	APOE	Apolipoprotein E
A16	Hs.9754	NM_012068	ATF5	Activating transcription factor 5
A17	Hs.555966	NM_020371	AVEN	Apoptosis, caspase activation inhibitor
A18	Hs.72885	NM_001700	AZU1	Azurocidin 1
A19	Hs.370254	NM_004322	BAD	BCL2-associated agonist of cell death
A20	Hs.377484	NM_004323	BAG1	BCL2-associated athanogene
A21	Hs.523309	NM_004281	BAG3	BCL2-associated athanogene 3
A22	Hs.194726	NM_004874	BAG4	BCL2-associated athanogene 4
A23	Hs.485139	NM_001188	BAK1	BCL2-antagonist/killer 1
A24	Hs.624291	NM_004324	BAX	BCL2-associated X protein
B01	Hs.467020	NM_014417	BBC3	BCL2 binding component 3
B02	Hs.193516	NM_003921	BCL10	B-cell CLL/lymphoma 10
B03	Hs.150749	NM_000633	BCL2	B-cell CLL/lymphoma 2
B04	Hs.227817	NM_004049	BCL2A1	BCL2-related protein A1
B05	Hs.516966	NM_138578	BCL2L1	BCL2-like 1
B06	Hs.283672	NM_020396	BCL2L10	BCL2-like 10 (apoptosis facilitator)
B07	Hs.469658	NM_006538	BCL2L11	BCL2-like 11 (apoptosis facilitator)
B08	Hs.631672	NM_015367	BCL2L13	BCL2-like 13 (apoptosis facilitator)
B09	Hs.410026	NM_004050	BCL2L2	BCL2-like 2
B10	Hs.31210	NM_005178	BCL3	B-cell CLL/lymphoma 3
B11	Hs.478588	NM_001706	BCL6	B-cell CLL/lymphoma 6
B12	Hs.486542	NM_014739	BCLAF1	BCL2-associated transcription factor 1
B13	Hs.502182	NM_001709	BDNF	Brain-derived neurotrophic factor
B14	Hs.12272	NM_003766	BECN1	Beclin 1, autophagy related
B15	Hs.435556	NM_016561	BFAR	Bifunctional apoptosis regulator
B16	Hs.591054	NM_001196	BID	BH3 interacting domain death agonist
B17	Hs.475055	NM_001197	BIK	BCL2-interacting killer (apoptosis-inducing)
B18	Hs.696238	NM_001166	BIRC2	Baculoviral IAP repeat containing 2
B19	Hs.127799	NM_001165	BIRC3	Baculoviral IAP repeat containing 3
B20	Hs.728893	NM_001168	BIRC5	Baculoviral IAP repeat containing 5
B21	Hs.150107	NM_016252	BIRC6	Baculoviral IAP repeat containing 6
B22	Hs.256126	NM_022161	BIRC7	Baculoviral IAP repeat containing 7
B23	Hs.348263	NM_033341	BIRC8	Baculoviral IAP repeat containing 8
B24	Hs.145726	NM_001205	BNIP1	BCL2/adenovirus E1B 19kDa interacting protein 1
C01	Hs.646490	NM_004330	BNIP2	BCL2/adenovirus E1B 19kDa interacting protein 2
C02	Hs.144873	NM_004052	BNIP3	BCL2/adenovirus E1B 19kDa interacting protein 3

Position	UniGene	GenBank	Symbol	Description
C03	Hs.131226	NM_004331	BNIP3L	BCL2/adenovirus E1B 19kDa interacting protein 3-like
C04	Hs.293753	NM_032515	BOK	BCL2-related ovarian killer
C05	Hs.550061	NM_004333	BRAF	V-raf murine sarcoma viral oncogene homolog B1
C06	Hs.194143	NM_007294	BRCA1	Breast cancer 1, early onset
C07	Hs.258314	NM_004899	BRE	Brain and reproductive organ-expressed (TNFRSF1A modulator)
C08	Hs.159494	NM_000061	BTK	Bruton agammaglobulinemia tyrosine kinase
C09	Hs.57973	NM_014550	CARD10	Caspase recruitment domain family, member 10
C10	Hs.648101	NM_032415	CARD11	Caspase recruitment domain family, member 11
C11	Hs.675480	NM_024110	CARD14	Caspase recruitment domain family, member 14
C12	Hs.44102	NM_001007232	CARD17	Caspase recruitment domain family, member 17
C13	Hs.56279	NM_021571	CARD18	Caspase recruitment domain family, member 18
C14	Hs.200242	NM_032587	CARD6	Caspase recruitment domain family, member 6
C15	Hs.694071	NM_052813	CARD9	Caspase recruitment domain family, member 9
C16	Hs.2490	NM_033292	CASP1	Caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase)
C17	Hs.5353	NM_001230	CASP10	Caspase 10, apoptosis-related cysteine peptidase
C18	Hs.466057	NM_012114	CASP14	Caspase 14, apoptosis-related cysteine peptidase
C19	Hs.368982	NM_032982	CASP2	Caspase 2, apoptosis-related cysteine peptidase
C20	Hs.141125	NM_004346	CASP3	Caspase 3, apoptosis-related cysteine peptidase
C21	Hs.138378	NM_001225	CASP4	Caspase 4, apoptosis-related cysteine peptidase
C22	Hs.213327	NM_004347	CASP5	Caspase 5, apoptosis-related cysteine peptidase
C23	Hs.654616	NM_032992	CASP6	Caspase 6, apoptosis-related cysteine peptidase
C24	Hs.9216	NM_001227	CASP7	Caspase 7, apoptosis-related cysteine peptidase
D01	Hs.599762	NM_001228	CASP8	Caspase 8, apoptosis-related cysteine peptidase
D02	Hs.558218	NM_012115	CASP8AP2	Caspase 8 associated protein 2
D03	Hs.329502	NM_001229	CASP9	Caspase 9, apoptosis-related cysteine peptidase
D04	Hs.714363	NM_003655	CBX4	Chromobox homolog 4
D05	Hs.303649	NM_002982	CCL2	Chemokine (C-C motif) ligand 2
D06	Hs.523500	NM_001767	CD2	CD2 molecule
D07	Hs.355307	NM_001242	CD27	CD27 molecule
D08	Hs.591629	NM_006139	CD28	CD28 molecule
D09	Hs.479214	NM_001775	CD38	CD38 molecule
D10	Hs.472860	NM_001250	CD40	CD40 molecule, TNF receptor superfamily member 5
D11	Hs.592244	NM_000074	CD40LG	CD40 ligand
D12	Hs.58685	NM_014207	CD5	CD5 molecule
D13	Hs.501497	NM_001252	CD70	CD70 molecule
D14	Hs.370771	NM_000389	CDKN1A	Cyclin-dependent kinase inhibitor 1A (p21, Cip1)
D15	Hs.517106	NM_005194	CEBPB	CCAAT/enhancer binding protein (C/EBP), beta
D16	Hs.429666	NM_001806	CEBPG	CCAAT/enhancer binding protein (C/EBP), gamma
D17	Hs.461361	NM_006324	CFDP1	Craniofacial development protein 1
D18	Hs.170622	NM_005507	CFL1	Cofilin 1 (non-muscle)
D19	Hs.390736	NM_003879	CFLAR	CASP8 and FADD-like apoptosis regulator
D20	Hs.291363	NM_007194	CHEK2	CHK2 checkpoint homolog (S. pombe)
D21	Hs.249129	NM_001279	CIDEA	Cell death-inducing DFFA-like effector a
D22	Hs.642693	NM_014430	CIDEB	Cell death-inducing DFFA-like effector b
D23	Hs.567562	NM_022094	CIDEC	Cell death-inducing DFFA-like effector c
D24	Hs.570065	NM_000091	COL4A3	Collagen, type IV, alpha 3 (Goodpasture antigen)
E01	Hs.38533	NM_003805	CRADD	CASP2 and RIPK1 domain containing adaptor with death domain
E02	Hs.184085	NM_000394	CRYAA	Crystallin, alpha A
E03	Hs.408767	NM_001885	CRYAB	Crystallin, alpha B
E04	Hs.146806	NM_003592	CUL1	Cullin 1
E05	Hs.82919	NM_003591	CUL2	Cullin 2
E06	Hs.372286	NM_003590	CUL3	Cullin 3
E07	Hs.339735	NM_003589	CUL4A	Cullin 4A
E08	Hs.440320	NM_003478	CUL5	Cullin 5
E09	Hs.437060	NM_018947	CYCS	Cytochrome c, somatic
E10	Hs.82890	NM_001344	DAD1	Defender against cell death 1
E11	Hs.75189	NM_004394	DAP	Death-associated protein
E12	Hs.516746	NM_004632	DAP3	Death associated protein 3
E13	Hs.380277	NM_004938	DAPK1	Death-associated protein kinase 1
E14	Hs.237886	NM_014326	DAPK2	Death-associated protein kinase 2
E15	Hs.631844	NM_001348	DAPK3	Death-associated protein kinase 3
E16	Hs.336916	NM_001350	DAXX	Death-domain associated protein
E17	Hs.414480	NM_001352	DBP	D site of albumin promoter (albumin D-box) binding protein
E18	Hs.579550	NM_005215	DCC	Deleted in colorectal carcinoma
E19	Hs.247362	NM_013974	DDAH2	Dimethylarginine dimethylaminohydrolase 2
E20	Hs.728989	NM_004083	DDIT3	DNA-damage-inducible transcript 3
E21	Hs.591405	NM_007204	DDX20	DEAD (Asp-Glu-Ala-Asp) box polypeptide 20
E22	Hs.517342	NM_001039711	DEDD	Death effector domain containing
E23	Hs.515432	NM_133328	DEDD2	Death effector domain containing 2
E24	Hs.498727	NM_014762	DHCR24	24-dehydrocholesterol reductase
F01	Hs.169611	NM_019887	DIABLO	Diablo, IAP-binding mitochondrial protein

Position	UniGene	GenBank	Symbol	Description
F02	Hs.13495	NM_006268	DPF2	D4, zinc and double PHD fingers family 2
F03	Hs.173135	NM_003583	DYRK2	Dual-specificity tyrosine-(Y)-phosphorylation regulated kinase 2
F04	Hs.105407	NM_001399	EDA	Ectodysplasin A
F05	Hs.171971	NM_022336	EDAR	Ectodysplasin A receptor
F06	Hs.433839	NM_001958	EEF1A2	Eukaryotic translation elongation factor 1 alpha 2
F07	Hs.716416	NM_004879	EI24	Etoposide induced 2.4 mRNA
F08	Hs.591589	NM_004836	EIF2AK3	Eukaryotic translation initiation factor 2-alpha kinase 3
F09	Hs.658200	NM_178040	ERC1	ELKS/RAB6-interacting/CAST family member 1
F10	Hs.487294	NM_000400	ERCC2	Excision repair cross-complementing rodent repair deficiency, complementation group 2
F11	Hs.469872	NM_000122	ERCC3	Excision repair cross-complementing rodent repair deficiency, complementation group 3 (xeroderma pigmentosum group B complementing)
F12	Hs.133982	NM_001433	ERN1	Endoplasmic reticulum to nucleus signaling 1
F13	Hs.592041	NM_033266	ERN2	Endoplasmic reticulum to nucleus signaling 2
F14	Hs.655207	NM_000506	F2	Coagulation factor II (thrombin)
F15	Hs.482562	NM_001992	F2R	Coagulation factor II (thrombin) receptor
F16	Hs.86131	NM_003824	FADD	Fas (TNFRSF6)-associated via death domain
F17	Hs.173438	NM_018147	FAIM	Fas apoptotic inhibitory molecule
F18	Hs.567424	NM_012306	FAIM2	Fas apoptotic inhibitory molecule 2
F19	Hs.244139	NM_000043	FAS	Fas (TNF receptor superfamily, member 6)
F20	Hs.2007	NM_000639	FASLG	Fas ligand (TNF superfamily, member 6)
F21	Hs.647094	NM_006712	FASTK	Fas-activated serine/threonine kinase
F22	Hs.362733	NM_015322	FEM1B	Fem-1 homolog b (C. elegans)
F23	Hs.289292	NM_023067	FOXL2	Forkhead box L2
F24	Hs.370666	NM_002015	FOXO1	Forkhead box O1
G01	Hs.220950	NM_001455	FOXO3	Forkhead box O3
G02	Hs.248114	NM_000514	GDNF	Glial cell derived neurotrophic factor
G03	Hs.526967	NM_207410	GFRAL	GDNF family receptor alpha like
G04	Hs.268849	NM_006708	GLO1	Glyoxalase I
G05	Hs.76686	NM_000581	GPX1	Glutathione peroxidase 1
G06	Hs.654847	NM_000841	GRM4	Glutamate receptor, metabotropic 4
G07	Hs.523836	NM_000852	GSTP1	Glutathione S-transferase pi 1
G08	Hs.439815	NM_006402	HBXIP	Hepatitis B virus x interacting protein
G09	Hs.88556	NM_004964	HDAC1	Histone deacetylase 1
G10	Hs.519632	NM_003883	HDAC3	Histone deacetylase 3
G11	Hs.329266	NM_005338	HIP1	Huntingtin interacting protein 1
G12	Hs.729705	NM_022740	HIPK2	Homeodomain interacting protein kinase 2
G13	Hs.201918	NM_005734	HIPK3	Homeodomain interacting protein kinase 3
G14	Hs.593339	NM_002128	HMGB1	High mobility group box 1
G15	Hs.87247	NM_003806	HRK	Harakiri, BCL2 interacting protein (contains only BH3 domain)
G16	Hs.192374	NM_003299	HSP90B1	Heat shock protein 90kDa beta (Grp94), member 1
G17	Hs.274402	NM_005346	HSPA1B	Heat shock 70kDa protein 1B
G18	Hs.184233	NM_004134	HSPA9	Heat shock 70kDa protein 9 (mortalin)
G19	Hs.520973	NM_001540	HSPB1	Heat shock 27kDa protein 1
G20	Hs.1197	NM_002157	HSPE1	Heat shock 10kDa protein 1 (chaperonin 10)
G21	Hs.90753	NM_006410	HTATIP2	HIV-1 Tat interactive protein 2, 30kDa
G22	Hs.518450	NM_002111	HTT	Huntingtin
G23	Hs.591785	NM_003897	IER3	Immediate early response 3
G24	Hs.380250	NM_005531	IFI16	Interferon, gamma-inducible protein 16
H01	Hs.730125	NM_002038	IFI6	Interferon, alpha-inducible protein 6
H02	Hs.211575	NM_000605	IFNA2	Interferon, alpha 2
H03	Hs.93177	NM_002176	IFNB1	Interferon, beta 1, fibroblast
H04	Hs.856	NM_000619	IFNG	Interferon, gamma
H05	Hs.412196	NM_018010	IFT57	Intraflagellar transport 57 homolog (Chlamydomonas)
H06	Hs.643120	NM_000875	IGF1R	Insulin-like growth factor 1 receptor
H07	Hs.252543	NM_201612	IKBIP	IKKB interacting protein
H08	Hs.43505	NM_003639	IKBKG	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma
H09	Hs.193717	NM_000572	IL10	Interleukin 10
H10	Hs.83077	NM_001562	IL18	Interleukin 18 (interferon-gamma-inducing factor)
H11	Hs.661017	NM_013371	IL19	Interleukin 19
H12	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
H13	Hs.89679	NM_000586	IL2	Interleukin 2
H14	Hs.55378	NM_139017	IL31RA	Interleukin 31 receptor A
H15	Hs.407506	NM_002191	INHBA	Inhibin, alpha
H16	Hs.583348	NM_002192	INHBA	Inhibin, beta A
H17	Hs.482605	NM_152405	JMY	Junction mediating and regulatory protein, p53 cofactor
H18	Hs.72938	NM_002289	LALBA	Lactalbumin, alpha-
H19	Hs.470627	NM_005356	LCK	Lymphocyte-specific protein tyrosine kinase
H20	Hs.445351	NM_002305	LGALS1	Lectin, galactoside-binding, soluble, 1
H21	Hs.36	NM_000595	LTA	Lymphotoxin alpha (TNF superfamily, member 1)
H22	Hs.376208	NM_002341	LTB	Lymphotoxin beta (TNF superfamily, member 3)

Position	UniGene	GenBank	Symbol	Description
H23	Hs.11116	NM_002342	LTBR	Lymphotoxin beta receptor (TNFR superfamily, member 3)
H24	Hs.82548	NM_003682	MADD	MAP-kinase activating death domain
I01	Hs.80395	NM_002371	MAL	Mal, T-cell differentiation protein
I02	Hs.601217	NM_173844	MALT1	Mucosa associated lymphoid tissue lymphoma translocation gene 1
I03	Hs.466743	NM_002446	MAP3K10	Mitogen-activated protein kinase kinase kinase 10
I04	Hs.186486	NM_005923	MAP3K5	Mitogen-activated protein kinase kinase kinase 5
I05	Hs.431850	NM_002745	MAPK1	Mitogen-activated protein kinase 1
I06	Hs.138211	NM_002750	MAPK8	Mitogen-activated protein kinase 8
I07	Hs.558180	NM_012324	MAPK8IP2	Mitogen-activated protein kinase 8 interacting protein 2
I08	Hs.35947	NM_003925	MBD4	Methyl-CpG binding domain protein 4
I09	Hs.632486	NM_021960	MCL1	Myeloid cell leukemia sequence 1 (BCL2-related)
I10	Hs.654688	NM_020831	MKL1	Megakaryoblastic leukemia (translocation) 1
I11	Hs.24719	NM_022151	MOAP1	Modulator of apoptosis 1
I12	Hs.458272	NM_000250	MPO	Myeloperoxidase
I13	Hs.445052	NM_000179	MSH6	MutS homolog 6 (E. coli)
I14	Hs.485262	NM_014341	MTCH1	Mitochondrial carrier 1
I15	Hs.145932	NM_004923	MTL5	Metallothionein-like 5, testis-specific (tesmin)
I16	Hs.517307	NM_002462	MX1	Myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)
I17	Hs.179718	NM_002466	MYBL2	V-myb myeloblastosis viral oncogene homolog (avian)-like 2
I18	Hs.202453	NM_002467	MYC	V-myc myelocytomatosis viral oncogene homolog (avian)
I19	Hs.708160	NM_078471	MYO18A	Myosin XVIIIa
I20	Hs.710305	NM_004536	NAIP	NLR family, apoptosis inhibitory protein
I21	Hs.534453	NM_015965	NDUFA13	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 13
I22	Hs.502528	NM_004551	NDUFS3	NADH dehydrogenase (ubiquinone) Fe-S protein 3, 30kDa (NADH-coenzyme Q reductase)
I23	Hs.654408	NM_003998	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
I24	Hs.73090	NM_002502	NFKB2	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)
J01	Hs.415768	NM_002507	NGFR	Nerve growth factor receptor
J02	Hs.590927	NM_001189	NKX3-2	NK3 homeobox 2
J03	Hs.574741	NM_021209	NLRC4	NLR family, CARD domain containing 4
J04	Hs.104305	NM_033004	NLRP1	NLR family, pyrin domain containing 1
J05	Hs.631573	NM_033297	NLRP12	NLR family, pyrin domain containing 12
J06	Hs.369279	NM_017852	NLRP2	NLR family, pyrin domain containing 2
J07	Hs.159483	NM_183395	NLRP3	NLR family, pyrin domain containing 3
J08	Hs.514065	NM_002513	NME3	Non-metastatic cells 3, protein expressed in
J09	Hs.715767	NM_003551	NME5	Non-metastatic cells 5, protein expressed in (nucleoside-diphosphate kinase)
J10	Hs.405153	NM_006092	NOD1	Nucleotide-binding oligomerization domain containing 1
J11	Hs.592072	NM_022162	NOD2	Nucleotide-binding oligomerization domain containing 2
J12	Hs.513667	NM_003946	NOL3	Nucleolar protein 3 (apoptosis repressor with CARD domain)
J13	Hs.487360	NM_024408	NOTCH2	Notch 2
J14	Hs.657932	NM_024505	NOX5	NADPH oxidase, EF-hand calcium binding domain 5
J15	Hs.557550	NM_199185	NPM1	Nucleophosmin (nucleolar phosphoprotein B23, numatrin)
J16	Hs.408515	NM_013982	NRG2	Neuregulin 2
J17	Hs.99171	NM_002527	NTF3	Neurotrophin 3
J18	Hs.493767	NM_001161	NUDT2	Nudix (nucleoside diphosphate linked moiety X)-type motif 2
J19	Hs.513463	NM_012385	NUPR1	Nuclear protein, transcriptional regulator, 1
J20	Hs.594504	NM_130837	OPA1	Optic atrophy 1 (autosomal dominant)
J21	Hs.32539	NM_177990	PAK7	P21 protein (Cdc42/Rac)-activated kinase 7
J22	Hs.113253	NM_002584	PAX7	Paired box 7
J23	Hs.20930	NM_020418	PCBP4	Poly(rC) binding protein 4
J24	Hs.443831	NM_004708	PDCD5	Programmed cell death 5
K01	Hs.379186	NM_013232	PDCD6	Programmed cell death 6
K02	Hs.517216	NM_003768	PEA15	Phosphoprotein enriched in astrocytes 15
K03	Hs.592290	NM_145886	PIDD	P53-induced death domain protein
K04	Hs.553498	NM_006218	PIK3CA	Phosphoinositide-3-kinase, catalytic, alpha polypeptide
K05	Hs.371344	NM_005027	PIK3R2	Phosphoinositide-3-kinase, regulatory subunit 2 (beta)
K06	Hs.496096	NM_006875	PIM2	Pim-2 oncogene
K07	Hs.715495	NM_002656	PLAGL1	Pleiomorphic adenoma gene-like 1
K08	Hs.154104	NM_002657	PLAGL2	Pleiomorphic adenoma gene-like 2
K09	Hs.466383	NM_024310	PLEKHF1	Pleckstrin homology domain containing, family F (with FYVE domain) member 1
K10	Hs.143436	NM_000301	PLG	Plasminogen
K11	Hs.96	NM_021127	PMAIP1	Phorbol-12-myristate-13-acetate-induced protein 1
K12	Hs.526464	NM_033238	PML	Promyelocytic leukemia
K13	Hs.432752	NM_017542	POGK	Pogo transposable element with KRAB domain
K14	Hs.654484	NM_002690	POLB	Polymerase (DNA directed), beta
K15	Hs.654522	NM_006237	POU4F1	POU class 4 homeobox 1
K16	Hs.709297	NM_015316	PPP1R13B	Protein phosphatase 1, regulatory (inhibitor) subunit 13B
K17	Hs.483408	NM_002715	PPP2CA	Protein phosphatase 2, catalytic subunit, alpha isozyme
K18	Hs.467192	NM_014225	PPP2R1A	Protein phosphatase 2, regulatory subunit A, alpha
K19	Hs.584790	NM_002716	PPP2R1B	Protein phosphatase 2, regulatory subunit A, beta
K20	Hs.432121	NM_005809	PRDX2	Peroxiredoxin 2

Position	UniGene	GenBank	Symbol	Description
K21	Hs.43322	NM_006251	PRKAA1	Protein kinase, AMP-activated, alpha 1 catalytic subunit
K22	Hs.531704	NM_002737	PRKCA	Protein kinase C, alpha
K23	Hs.580351	NM_005400	PRKCE	Protein kinase C, epsilon
K24	Hs.496255	NM_002744	PRKCZ	Protein kinase C, zeta
L01	Hs.570274	NM_003690	PRKRA	Protein kinase, interferon-inducible double stranded RNA dependent activator
L02	Hs.368587	NM_000949	PRLR	Prolactin receptor
L03	Hs.517352	NM_016335	PRODH	Proline dehydrogenase (oxidase) 1
L04	Hs.528665	NM_021935	PROK2	Prokineticin 2
L05	Hs.158301	NM_006261	PROP1	PROP paired-like homeobox 1
L06	Hs.262857	NM_015225	PRUNE2	Prune homolog 2 (Drosophila)
L07	Hs.3260	NM_000021	PSEN1	Presenilin 1
L08	Hs.500466	NM_000314	PTEN	Phosphatase and tensin homolog
L09	Hs.37045	NM_000315	PTH	Parathyroid hormone
L10	Hs.499094	NM_013258	PYCARD	PYD and CARD domain containing
L11	Hs.1497	NM_000966	RARG	Retinoic acid receptor, gamma
L12	Hs.664080	NM_002890	RASA1	RAS p21 protein activator (GTPase activating protein) 1
L13	Hs.502875	NM_021975	RELA	V-rel reticuloendotheliosis viral oncogene homolog A (avian)
L14	Hs.523744	NM_022457	RFWD2	Ring finger and WD repeat domain 2
L15	Hs.519842	NM_003804	RIPK1	Receptor (TNFRSF)-interacting serine-threonine kinase 1
L16	Hs.103755	NM_003821	RIPK2	Receptor-interacting serine-threonine kinase 2
L17	Hs.268551	NM_006871	RIPK3	Receptor-interacting serine-threonine kinase 3
L18	Hs.134623	NM_014245	RNF7	Ring finger protein 7
L19	Hs.356572	NM_001006	RPS3A	Ribosomal protein S3A
L20	Hs.704007	NM_007008	RTN4	Reticulon 4
L21	Hs.170019	NM_004350	RUNX3	Runt-related transcription factor 3
L22	Hs.422181	NM_006272	S100B	S100 calcium binding protein B
L23	Hs.655088	NM_013260	SAP30BP	SAP30 binding protein
L24	Hs.502883	NM_005146	SART1	Squamous cell carcinoma antigen recognized by T cells
M01	Hs.655281	NM_006378	SEMA4D	Sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4D
M02	Hs.272168	NM_006811	SERINC3	Serine incorporator 3
M03	Hs.594481	NM_002575	SERPINB2	Serpin peptidase inhibitor, clade B (ovalbumin), member 2
M04	Hs.104879	NM_004155	SERPINB9	Serpin peptidase inhibitor, clade B (ovalbumin), member 9
M05	Hs.523718	NM_006142	SFN	Stratifin
M06	Hs.713546	NM_003012	SFRP1	Secreted frizzled-related protein 1
M07	Hs.136309	NM_016009	SH3GLB1	SH3-domain GRB2-like endophilin B1
M08	Hs.530477	NM_006747	SIPA1	Signal-induced proliferation-associated 1
M09	Hs.632093	NM_005871	SMNDC1	Survival motor neuron domain containing 1
M10	Hs.271771	NM_000345	SNCA	Synuclein, alpha (non A4 component of amyloid precursor)
M11	Hs.485572	NM_003877	SOCS2	Suppressor of cytokine signaling 2
M12	Hs.527973	NM_003955	SOCS3	Suppressor of cytokine signaling 3
M13	Hs.517262	NM_138927	SON	SON DNA binding protein
M14	Hs.68061	NM_021972	SPHK1	Sphingosine kinase 1
M15	Hs.632188	NM_003123	SPN	Sialophorin
M16	Hs.313	NM_000582	SPP1	Secreted phosphoprotein 1
M17	Hs.12409	NM_001048	SST	Somatostatin
M18	Hs.225995	NM_001051	SSTR3	Somatostatin receptor 3
M19	Hs.657598	NM_006463	STAMBIP	STAM binding protein
M20	Hs.642990	NM_007315	STAT1	Signal transducer and activator of transcription 1, 91kDa
M21	Hs.437058	NM_003152	STAT5A	Signal transducer and activator of transcription 5A
M22	Hs.595276	NM_012448	STAT5B	Signal transducer and activator of transcription 5B
M23	Hs.706869	NM_004760	STK17A	Serine/threonine kinase 17a
M24	Hs.710234	NM_004226	STK17B	Serine/threonine kinase 17b
N01	Hs.34576	NM_006024	TAX1BP1	Tax1 (human T-cell leukemia virus type I) binding protein 1
N02	Hs.505874	NM_013254	TBK1	TANK-binding kinase 1
N03	Hs.714737	NM_016569	TBX3	T-box 3
N04	Hs.381715	NM_181486	TBX5	T-box 5
N05	Hs.385870	NM_003212	TDGF1	Teratocarcinoma-derived growth factor 1
N06	Hs.645227	NM_000660	TGFB1	Transforming growth factor, beta 1
N07	Hs.728844	NM_022037	TIA1	TIA1 cytotoxic granule-associated RNA binding protein
N08	Hs.462590	NM_004740	TIAF1	TGFB1-induced anti-apoptotic factor 1
N09	Hs.501203	NM_003252	TIAL1	TIA1 cytotoxic granule-associated RNA binding protein-like 1
N10	Hs.644633	NM_000362	TIMP3	TIMP metalloproteinase inhibitor 3
N11	Hs.519033	NM_003264	TLR2	Toll-like receptor 2
N12	Hs.125221	NM_030755	TMX1	Thioredoxin-related transmembrane protein 1
N13	Hs.241570	NM_000594	TNF	Tumor necrosis factor
N14	Hs.211600	NM_006290	TNFAIP3	Tumor necrosis factor, alpha-induced protein 3
N15	Hs.656274	NM_014350	TNFAIP8	Tumor necrosis factor, alpha-induced protein 8
N16	Hs.591834	NM_003844	TNFRSF10A	Tumor necrosis factor receptor superfamily, member 10a
N17	Hs.521456	NM_003842	TNFRSF10B	Tumor necrosis factor receptor superfamily, member 10b
N18	Hs.213467	NM_003840	TNFRSF10D	Tumor necrosis factor receptor superfamily, member 10d, decoy with truncated

Position	UniGene	GenBank	Symbol	Description
				death domain
N19	Hs.212680	NM_004195	TNFRSF18	Tumor necrosis factor receptor superfamily, member 18
N20	Hs.149168	NM_018647	TNFRSF19	Tumor necrosis factor receptor superfamily, member 19
N21	Hs.279594	NM_001065	TNFRSF1A	Tumor necrosis factor receptor superfamily, member 1A
N22	Hs.256278	NM_001066	TNFRSF1B	Tumor necrosis factor receptor superfamily, member 1B
N23	Hs.443577	NM_014452	TNFRSF21	Tumor necrosis factor receptor superfamily, member 21
N24	Hs.462529	NM_003790	TNFRSF25	Tumor necrosis factor receptor superfamily, member 25
O01	Hs.434878	NM_003823	TNFRSF6B	Tumor necrosis factor receptor superfamily, member 6b, decoy
O02	Hs.1314	NM_001243	TNFRSF8	Tumor necrosis factor receptor superfamily, member 8
O03	Hs.654459	NM_001561	TNFRSF9	Tumor necrosis factor receptor superfamily, member 9
O04	Hs.478275	NM_003810	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
O05	Hs.129708	NM_003807	TNFSF14	Tumor necrosis factor (ligand) superfamily, member 14
O06	Hs.241382	NM_005118	TNFSF15	Tumor necrosis factor (ligand) superfamily, member 15
O07	Hs.248197	NM_005092	TNFSF18	Tumor necrosis factor (ligand) superfamily, member 18
O08	Hs.654445	NM_001244	TNFSF8	Tumor necrosis factor (ligand) superfamily, member 8
O09	Hs.654481	NM_000546	TP53	Tumor protein p53
O10	Hs.523968	NM_005426	TP53BP2	Tumor protein p53 binding protein, 2
O11	Hs.50649	NM_004881	TP53I3	Tumor protein p53 inducible protein 3
O12	Hs.137569	NM_003722	TP63	Tumor protein p63
O13	Hs.697294	NM_005427	TP73	Tumor protein p73
O14	Hs.591347	NM_003287	TPD52L1	Tumor protein D52-like 1
O15	Hs.374596	NM_003295	TPT1	Tumor protein, translationally-controlled 1
O16	Hs.460996	NM_003789	TRADD	TNFRSF1A-associated via death domain
O17	Hs.522506	NM_021138	TRAF2	TNF receptor-associated factor 2
O18	Hs.510528	NM_003300	TRAF3	TNF receptor-associated factor 3
O19	Hs.523930	NM_004619	TRAF5	TNF receptor-associated factor 5
O20	Hs.591983	NM_004620	TRAF6	TNF receptor-associated factor 6
O21	Hs.643537	NM_032271	TRAF7	TNF receptor-associated factor 7
O22	Hs.517972	NM_005879	TRAFIP	TRAF interacting protein
O23	Hs.69499	NM_016399	TRIAF1	TP53 regulated inhibitor of apoptosis 1
O24	Hs.716410	NM_004089	TSC22D3	TSC22 domain family, member 3
P01	Hs.493791	NM_006377	UNC13B	Unc-13 homolog B (C. elegans)
P02	Hs.472038	NM_016037	UTP11L	UTP11-like, U3 small nucleolar ribonucleoprotein, (yeast)
P03	Hs.529782	NM_007126	VCP	Valosin containing protein
P04	Hs.73793	NM_003376	VEGFA	Vascular endothelial growth factor A
P05	Hs.517792	NM_000551	VHL	Von Hippel-Lindau tumor suppressor
P06	Hs.356076	NM_001167	XIAP	X-linked inhibitor of apoptosis
P07	Hs.492407	NM_003406	YWHAZ	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide
P08	Hs.444451	NM_016653	ZAK	Sterile alpha motif and leucine zipper containing kinase AZK
P09	Hs.194157	NM_016478	ZC3HC1	Zinc finger, C3HC-type containing 1
P10	Hs.631623	NM_005815	ZNF443	Zinc finger protein 443
P11	Hs.520640	NM_001101	ACTB	Actin, beta
P12	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
P13	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
P14	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
P15	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
P16	N/A	SA_00105	HGDC	Human Genomic DNA Contamination
P17	N/A	SA_00105	HGDC	Human Genomic DNA Contamination
P18	N/A	SA_00105	HGDC	Human Genomic DNA Contamination
P19	N/A	SA_00104	RTC	Reverse Transcription Control
P20	N/A	SA_00104	RTC	Reverse Transcription Control
P21	N/A	SA_00104	RTC	Reverse Transcription Control
P22	N/A	SA_00103	PPC	Positive PCR Control
P23	N/A	SA_00103	PPC	Positive PCR Control
P24	N/A	SA_00103	PPC	Positive PCR Control

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RT ² SYBR Green qPCR Mastermix (8)*	For 4 x 384 assays in 384-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad model CFX384; Roche LightCycler 480 (384-well); all other cyclers	330501
RT ² SYBR Green ROX [™] qPCR Mastermix (8)*	For 4 x 384 assays in 384-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 7900HT, ViiA 7 (384-well blocks)	330521
RT ² SYBR Green Fluor qPCR Mastermix (8)*	For 4 x 384 assays in 384-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler [®] , iQ [™] 5, MyiQ [™] , MyiQ2	330511

* Larger kit sizes available; please inquire.

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