

Gene expression altered by kaempferol treatment in HaCaT keratinocytes

GenBank No	Name	Symbol	Function	Cluster	Fold change		
					3h	6h	24h
BM787728	Actinin, alpha 1	ACTN1	cell adhesion and cytoskeleton	2	-2.5	-1.2	-1.4
BM793646	Desmoglein 2	DSG2	cell adhesion and cytoskeleton	2	-2.4	-1.1	-1.5
BF694858	Formin binding protein 4	FNBP4	cell adhesion and cytoskeleton	2	-2.4	-1.2	-1.4
BQ417219	Glycoprotein V (platelet)	GP5	cell adhesion and cytoskeleton	2	-2.7	-1.1	-1.4
BG752932	Neurofibromin 2 (bilateral acoustic neuroma)	NF2	cell adhesion and cytoskeleton	2	-2.4	-1.1	-1.5
BM925356	Stomatin	STOM	cell adhesion and cytoskeleton	2	-2.2	-1.2	-1.4
BM750409	Adaptor protein containing pH domain, PTB domain and leucine zipper motif 1	APPL	cell cycle	2	-2.4	-1.3	-1.5
BQ082207	Cell division cycle 2-like 5 (cholinesterase-related cell division controller)	CDC2L5	cell cycle	2	-2.5	-1.3	-1.5
BM783064	Radical fringe homolog (Drosophila)	RFNG	cell cycle	2	-2.5	-1.2	-1.2
BM752799	S-phase kinase-associated protein 2 (p45)	SKP2	cell cycle	2	-2.2	-1.7	-1.6
BM755446	Thioredoxin-like 4B	TXNL4B	cell cycle	2	-2.2	-1.3	-1.6
BM748933	Endoplasmic reticulum thioredoxin superfamily member, 18 kDa	TLP19	cell redox homeostasis	1	1.2	1.0	2.1
BM749654	Peroxiredoxin 3	PRDX3	cell redox homeostasis	1	1.4	1.2	3.4
BM789388	Thioredoxin reductase 1	TXNRD1	cell redox homeostasis	1	1.2	3.8	2.8
AI022345	Thioredoxin reductase 1	TXNRD1	cell redox homeostasis	1	1.4	2.9	1.9
BE872273	Nucleoredoxin	NXN	cell redox homeostasis	2	-2.3	-1.1	-1.3
BM761603	FOS-like antigen 1	FOSL1	defense and immune response	1	-1.2	2.1	2.5
BM759589	Stress-induced-phosphoprotein 1 (Hsp70/Hsp90-organizing protein)	STIP1	defense and immune response	2	-2.7	-1.3	-1.5
BM786490	DEAD (Asp-Glu-Ala-Asp) box polypeptide 51	DDX51	DNA modification and replication	2	-2.4	-1.3	-1.6
BM787857	Origin recognition complex, subunit 6 homolog-like (yeast)	ORC6L	DNA modification and replication	2	-2.3	-1.2	-1.4

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BM757481	Polymerase (DNA directed) nu	POLN	DNA modification and replication	2	-2.3	-1.1	-1.4
BM787623	Topoisomerase (DNA) II binding protein 1	TOPBP1	DNA modification and replication	2	-2.5	-1.3	-1.4
BM793025	Topoisomerase (DNA) III alpha	TOP3A	DNA modification and replication	2	-2.1	-1.3	-1.6
BM756089	Clusterin (complement lysis inhibitor, SP-40,40, sulfated glycoprotein 2, testosterone-repressed prostate message 2, apolipoprotein J)	CLU	defense and immune response	1	1.2	1.2	2.3
AF027706	Receptor-interacting serine-threonine kinase 2	RIPK2	defense and immune response	1	1.9	1.4	3.3
BM757316	Sp2 transcription factor	SP2	defense and immune response	1	1.4	1.4	2.6
BM791916	Cathepsin S	CTSS	defense and immune response	2	-2.1	-1.1	-1.4
BM751205	CD68 antigen	CD68	defense and immune response	2	-2.2	-1.2	-1.5
BM785914	Glucose phosphate isomerase	GPI	defense and immune response	2	-2.1	-1.1	-1.4
BM784811	Interferon (alpha, beta and omega) receptor 1	IFNAR1	defense and immune response	2	-2.5	-1.5	-1.6
BM750766	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)	NFKB2	defense and immune response	2	-2.3	-1.2	-1.4
BM761120	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, beta	NFKBIB	defense and immune response	2	-2.4	-1.3	-1.5
BM786517	Signal transducer and activator of transcription 3 (acute-phase response factor)	STAT3	defense and immune response	2	-2.2	-1.2	-1.4
BM742118	Signal transducer and activator of transcription 3 (acute-phase response factor)	STAT3	defense and immune response	2	-2.8	-1.2	-1.6
BM741126	Transcription factor 7 (T-cell specific, HMG-box)	TCF7	defense and immune response	2	-2.1	-1.3	-1.4
BM794187	Interferon, alpha-inducible protein (clone IFI-15K)	G1P2	defense and immune response	3	-1.4	-1.7	-2.6
BM790031	Interferon-induced protein with tetratricopeptide repeats 3	IFIT3	defense and immune response	3	-1.0		-3.3
BM763771	Toll-like receptor adaptor molecule 1	TRIF	defense and immune response	3	-1.4	-1.5	-2.0
BM759632	Adaptor-related protein complex 1, mu 1 subunit	AP1M1	intracellular transport	1	1.4	-1.0	2.7
BM758517	Adaptor-related protein complex 1, sigma 3 subunit	AP1S3	intracellular transport	2	-2.7	-1.3	-1.5
BM750940	Adaptor-related protein complex 3, sigma 2 subunit	AP3S2	intracellular transport	2	-2.6	-1.2	-1.5

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BX647920	Golgi autoantigen, golgin subfamily a, 2	GOLGA2	intracellular transport	2	-2.5	-1.2	-1.5
BX105880	Intersectin 2	ITSN2	intracellular transport	2	-2.6	-1.0	-1.3
BI038938	Myosin, heavy polypeptide 9, non-muscle	MYH9	intracellular transport	2	-2.2	-1.3	-1.4
BM750459	Nudix (nucleoside diphosphate linked moiety X)-type motif 4	NUDT4	intracellular transport	2	-2.4	-1.2	-1.4
BM785614	Protective protein for beta-galactosidase (galactosialidosis)	PPGB	intracellular transport	2	-2.5	-1.3	-1.6
CB104873	RAB1B, member RAS oncogene family	RAB1B	intracellular transport	2	-2.8	-1.3	-1.5
NM_014999	RAB21, member RAS oncogene family	RAB21	intracellular transport	2	-2.5	-1.1	-1.4
AI379719	Sorting nexin 5	SNX5	intracellular transport	2	-2.5	-1.3	-1.5
AK126465	Trans-golgi network protein 2	TGOLN2	intracellular transport	2	-2.5	-1.2	-1.3
BM794327	Insulin induced gene 1	INSIG1	metablism	3	-1.3	-1.8	-2.1
BM767910	Aldehyde dehydrogenase 3 family, memberA1	ALDH3A1	metabolism	1	1.5	1.3	2.7
BM738976	Aldo-keto reductase family 1, member C2 (dihydrodiol dehydrogenase 2; bile acid binding protein; 3-alpha hydroxysteroid dehydrogenase, type III)	AKR1C1	metabolism	1	1.5	1.5	3.2
BM772580	Aldo-keto reductase family 1, member C3 (3-alpha hydroxysteroid dehydrogenase, type II)	AKR1C3	metabolism	1	1.7	1.4	4.3
BM749464	Phosphate cytidyltransferase 2, ethanolamine	PCYT2	metabolism	1	1.1	1.3	2.5
BM787682	5'-nucleotidase, cytosolic II	NT5C2	metabolism	2	-2.1	-1.3	-1.2
BM789270	Aldehyde dehydrogenase 1 family, member B1	ALDH1B1	metabolism	2	-2.2	-1.3	-1.4
AK123877	Aldehyde dehydrogenase 3 family, member A2	ALDH3A2	metabolism	2	-2.3	-1.2	-1.4
AW674711	Fucokinase	FUK	metabolism	2	-2.1	-1.1	-1.5
AF145023	Hydroxysteroid (17-beta) dehydrogenase 7	HSD17B7	metabolism	2	-2.2	-1.1	-1.4
CK005113	Isocitrate dehydrogenase 1 (NADP+), soluble	IDH1	metabolism	2	-2.3	-1.1	-1.5
BM751331	Isopentenyl-diphosphate delta isomerase 2	IDI2	metabolism	2	-2.2	-1.3	-1.5

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BM786493	Lipase, member H	LIPH	metabolism	2	-2.3	-1.0	-1.2
NM_000239	Lysozyme (renal amyloidosis)	LYZ	metabolism	2	-2.5	-1.2	-1.5
BM790413	Acetyl-Coenzyme A synthetase 2 (ADP forming)	ACAS2	metabolism	3	-1.3	-1.6	-2.8
BM788852	Lysozyme (renal amyloidosis)	LYZ	metabolism	2	-2.5	-1.0	-1.2
BM743201	ATP citrate lyase	ACLY	metabolism	3	-1.0	-2.0	-2.3
BM763995	Eukaryotic translation elongation factor 1 alpha 1	EEF1A1	protein biosynthesis and modification	1	-1.2	2.2	2.2
BM745910	Alanyl-tRNA synthetase like	AARSL	protein biosynthesis and modification	2	-2.5	-1.2	-1.6
AL039930	Deltex homolog 2 (Drosophila)	DTX2	protein biosynthesis and modification	2	-2.5	-1.3	-1.5
BM785042	Methionyl-tRNA formyltransferase, mitochondrial	MtFMT	protein biosynthesis and modification	2	-2.1	-1.1	-1.5
BM782100	Parkinson disease (autosomal recessive, juvenile) 2, parkin	PARK2	protein biosynthesis and modification	2	-2.4	-1.3	-1.7
BC030707	Peptidylprolyl isomerase D (cyclophilin D)	PPID	protein biosynthesis and modification	2	-2.4	-1.2	-1.5
BC013423	Procollagen-proline, 2-oxoglutarate 4-dioxygenase (proline 4-hydroxylase), alpha polypeptide II	P4HA2	protein biosynthesis and modification	2	-2.4	-1.2	-1.6
BM784581	Serine (or cysteine) proteinase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1	SERPINA1	protein biosynthesis and modification	2	-2.0	-1.2	-1.5
BX449079	Serine (or cysteine) proteinase inhibitor, clade F (alpha-2 antiplasmin, pigment epithelium derived factor), member 2	SERPINF2	protein biosynthesis and modification	2	-2.9	-1.2	-1.6
BM745603	Source of immunodominant MHC-associated peptides	SIMP	protein biosynthesis and modification	2	-2.6	-1.2	-1.4
BM773413	Proteasome (prosome, macropain) 26S subunit, non-ATPase, 14	PSMD14	protein biosynthesis and modification	2	-2.1	-1.3	-1.3
BM750445	Transmembrane protease, serine 3	TMPRSS3	protein biosynthesis and modification	2	-2.3	-1.4	-1.5
BM769452	2'-5'-oligoadenylate synthetase-like	OASL	protein biosynthesis and modification	3	-1.4	-2.1	-3.4
BM784305	Heat shock 27kDa protein 1	HSPB1	protein biosynthesis and modification	3	-1.1	-1.6	-2.5
BM739650	Tryptophanyl-tRNA synthetase	WARS	protein biosynthesis and modification	3	-1.4	-1.7	-2.7
BM757476	Tryptophanyl-tRNA synthetase	WARS	protein biosynthesis and modification	3	-1.5	-1.4	-2.5

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BM782879	Ubiquitin specific protease 9, X-linked (fat facets-like, Drosophila)	USP9X	protein biosynthesis and modification	3	1.1	-1.7	-2.5
BM749499	Exosome component 8	EXOSC8	RNA processing	1	1.8	1.2	3.1
BM750408	LUC7-like (S. cerevisiae)	LUC7L	RNA processing	2	-2.4	-1.3	-1.5
W72860	Ankyrin repeat and SOCS box-containing 8	ASB8	signal transduction	2	-2.4	-1.3	-1.4
BM787149	Calcium binding protein P22	CHP	signal transduction	2	-2.3	-1.4	-1.4
BQ321472	Calcium/calmodulin-dependent protein kinase kinase 2, beta	CAMKK2	signal transduction	2	-2.9	-1.2	-1.4
BM740193	Calcium/calmodulin-dependent serine protein kinase (MAGUK family)	CASK	signal transduction	2	-2.2	-1.2	-1.5
BM751912	Casein kinase 1, gamma 1	CSNK1G1	signal transduction	2	-2.6	-1.3	-1.5
BM761773	Caveolin 2	CAV2	signal transduction	2	-2.5	-1.3	-1.6
BE155243	G protein-coupled receptor kinase interactor 2	GIT2	signal transduction	2	-2.4	-1.2	-1.6
BM786945	LIM and senescent cell antigen-like domains 1	LIMS1	signal transduction	2	-2.2	-1.1	-1.2
AL110164	LIM and senescent cell antigen-like domains 1	LIMS1	signal transduction	2	-3.1	-1.2	-1.5
BM790133	Phosphatidylinositol 4-kinase, catalytic, beta polypeptide	PIK4CB	signal transduction	2	-2.7	-1.2	-1.6
BM767282	Phospholipase A2-activating protein	PLAA	signal transduction	2	-2.1	-1.1	-1.4
BM772207	Phospholipase A2-activating protein	PLAA	signal transduction	2	-2.0	-1.3	-1.4
BM785608	Protein kinase, AMP-activated, gamma 2 non-catalytic subunit	PRKAG2	signal transduction	2	-2.2	-1.2	-1.5
BM787878	PTK2 protein tyrosine kinase 2	PTK2	signal transduction	2	-2.1	-1.1	-1.4
BM793147	RAS protein activator like 1 (GAP1 like)	RASAL1	signal transduction	2	-2.1	-1.2	-1.4
BX648337	RasGEF domain family, member 1B	RASGEF1B	signal transduction	2	-2.4	-1.2	-1.5
BM752462	Rho-associated, coiled-coil containing protein kinase 2	ROCK2	signal transduction	2	-2.3	-1.2	-1.4
BM752511	Serine/threonine kinase 17b (apoptosis-inducing)	STK17B	signal transduction	2	-2.3	1.0	-1.4

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AL832591	Serine/threonine/tyrosine interacting protein	STYX	signal transduction	2	-2.3	-1.3	-1.4
NM_013257	Serum/glucocorticoid regulated kinase-like	SGKL	signal transduction	2	-2.5	-1.3	-1.3
BM785530	Syndecan 1	SDC1	signal transduction	2	-2.5	-1.2	-1.4
AI089275	Syndecan 4 (amphiglycan, ryudocan)	SDC4	signal transduction	3	-1.3	-1.5	-2.4
AI475332	CCAAT/enhancer binding protein zeta	CEBPZ	transcription regulation	2	-2.2	-1.2	-1.4
BM793777	MYB binding protein (P160) 1a	MYBBP1A	transcription regulation	2	-2.4	-1.2	1.0
AK091308	NMDA receptor regulated 1	NARG1	transcription regulation	2	-2.3	-1.2	-1.4
BM738548	SEC14-like 2 (<i>S. cerevisiae</i>)	SEC14L2	transcription regulation	2	-2.2	-1.1	-1.3
BM747886	SMAD, mothers against DPP homolog 9 (<i>Drosophila</i>)	SMAD9	transcription regulation	2	-2.1	-1.3	-1.3
BM746522	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily e, member 1	SMARCE1	transcription regulation	2	-2.3	-1.3	-1.4
NM_006284	TAF10 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 30kDa	TAF10	transcription regulation	2	-2.5	-1.3	-1.0
BM788970	TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor, 68kDa	TAF15	transcription regulation	2	-2.2	-1.1	-1.5
CB104801	Thyroid hormone receptor interactor 11	TRIP11	transcription regulation	2	-2.1	-1.3	-1.5
BM788650	A kinase (PRKA) anchor protein (yotiao) 9	AKAP9	transport	2	-2.2	-1.1	-1.4
BM742353	Low density lipoprotein receptor-related protein associated protein 1	LRPAP1	transport	2	-2.2	-1.1	-1.4
BM782262	Polymeric immunoglobulin receptor	PIGR	transport	2	-2.4	-1.1	-1.5
NM_031954	Potassium channel tetramerisation domain containing 10	KCTD10	transport	2	-2.1	-1.3	-1.5
BM744354	Potassium voltage-gated channel, Isk-related family, member 3	KCNE3	transport	2	-2.4	-1.3	-1.4
BM789500	Solute carrier family 30 (zinc transporter), member 4	SLC30A4	transport	2	-2.3	-1.3	-1.2
BM756300	Solute carrier family 31 (copper transporters), member 1	SLC31A1	transport	2	-2.3	-1.1	-1.4
NM_001859	Solute carrier family 31 (copper transporters), member 1	SLC31A1	transport	2	-2.7	-1.3	-1.4

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BM787821	Solute carrier family 31 (copper transporters), member 1	SLC31A1	transport	2	-2.3	-1.3	-1.5
BM772075	Solute carrier family 7, (cationic amino acid transporter, y+ system) member 11	SLC7A11	transport	2	-2.1	-1.1	-1.3
BM751070	Synaptotagmin XIII	SYT13	transport	2	-2.2	-1.2	-1.3
BM755434	Transmembrane 9 superfamily member 1	TM9SF1	transport	2	-2.4	-1.2	-1.4
BM787401	Coiled-coil-helix-coiled-coil-helix domain containing 1	CHCHD1	unknown	1	1.6	1.3	3.0
BM764394	CTCL tumor antigen se57-1	SE57-1	unknown	1	1.5	1.6	2.9
BM767070	Peroxisomal membrane protein 2, 22kDa	PXMP2	unknown	1	1.5	1.2	2.0
AF037630	Ankyrin repeat and sterile alpha motif domain containing 1	ANKS1	unknown	2	-2.2	-1.2	-1.5
BM749164	Chromosome 6 open reading frame 210	C6orf210	unknown	2	-2.2	-1.2	-1.4
BM743387	Chromosome 6 open reading frame 69	C6orf69	unknown	2	-2.4	-1.1	-1.3
BQ082124	Copine VIII	CPNE8	unknown	2	-2.3	-1.4	-1.3
BM763955	Hypoxia-inducible protein 2	HIG2	unknown	2	-2.0	-1.1	-1.4
BM782016	Interphase cytoplasmic foci protein 45	ICF45	unknown	2	-2.3	-1.1	-1.6
BM751923	Intersex-like (Drosophila)	IXL	unknown	2	-2.5	-1.2	-1.4
BM759265	CD82 antigen	KAI1	unknown	2	-2.1	-1.2	-1.4
AY251274	Junctophilin 3	JPH3	unknown	2	-2.2	-1.1	-1.2
BM788543	PDZ domain containing, X chromosome	FLJ21687	unknown	2	-2.4	-1.3	-1.4
BM746149	PQ loop repeat containing 2	PQLC2	unknown	2	-2.5	-1.4	-1.6
BM751773	Small EDRK-rich factor 2	SERF2	unknown	2	-2.4	-1.2	-1.5
BM747039	Small EDRK-rich factor 2	SERF2	unknown	2	-2.4	-1.1	-1.5
BM754369	Thioredoxin interacting protein	TXNIP	unknown	2	-2.2	-1.7	-1.4

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BM752295	Thioredoxin interacting protein	TXNIP	unknown	2	-2.7	-2.2	-2.0