

RT² Profiler PCR Array (384-Well Format)

Rabbit Molecular Toxicology PathwayFinder

Cat. no. 330231 PANZ-3401ZE

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 Rabbit Molecular Toxicology PathwayFinder RT² Profiler™ PCR Array profiles the expression of 370 key genes in at least 13 different biological pathways activated in response to experimental drugs under evaluation for their therapeutic efficacy. Profiling the expression of these genes facilitates characterization of the toxicological responses induced by such research drugs. Understanding these mechanisms can then guide chemical modifications to avoid the observed toxic responses rather than completely dismissing a class of experimental drugs otherwise effective at preventing or treating the target disease phenotype. All of the toxic response pathways represented by this array can be independent or interrelated. For example, inhibition of β -oxidation leads to steatosis, and uncoupling mitochondrial energy metabolism leads to apoptosis and necrosis. Treatments affecting reactive oxygen species metabolism or cellular redox status cause oxidative stress and induce antioxidant responses. These and other reactive chemicals also directly damage DNA or inhibit its repair activating DNA damage signaling and DNA repair pathways or apoptosis and necrosis under more extreme conditions of prolonged exposure or excess DNA, cell or tissue damage. Interference with protein synthesis causes endoplasmic reticulum stress and activates the unfolded protein response up-regulating heat shock protein and chaperone gene expression. Increased expression of the cytochrome P450 and other phase I drug metabolism enzymes occurs upon inhibiting or overwhelming their chemical modification activities. More severe and complex phenomena result when fatty acid and lipid metabolism (β -oxidation) is inhibited including the lipid storage disorders of steatosis, cholestasis, and phospholipidosis. Toxic responses in immune system cells bring about immunotoxicity and immunosuppression. Using real-time PCR, research studies can easily and reliably analyze the expression of a focused panel of genes on the array to determine which

molecular toxicological response pathways specific experimental drug candidates activate. Once the pathways involved are defined, further comprehensive surveys of more genes in those pathways can be performed using other application-specific or custom PCR Arrays designed for individual pathways.

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 cyclers (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	N/A	XM_002712100	AASS	Aminoadipate-semialdehyde synthase
A02	Ocu.3170	NM_001082159	ABCB1	ATP-binding cassette, sub-family B (MDR/TAP), member 1
A03	Ocu.2438	NM_001082083	ABCB11	ATP-binding cassette, sub-family B (MDR/TAP), member 11
A04	N/A	XM_002713834	ABCB4	ATP-binding cassette, sub-family B (MDR/TAP), member 4
A05	N/A	XM_002711739	ABCC1	ATP-binding cassette, sub-family C (CFTR/MRP), member 1
A06	N/A	XM_002713530	ACAA2	Acetyl-CoA acyltransferase 2
A07	N/A	XM_002719077	ACACA	Acetyl-CoA carboxylase alpha
A08	N/A	XM_002719769	ACAD10	Acyl-CoA dehydrogenase family, member 10
A09	N/A	XM_002713167	ACAD9	Acyl-CoA dehydrogenase family, member 9
A10	N/A	XM_002715911	ACADM	Acyl-CoA dehydrogenase, C-4 to C-12 straight chain
A11	N/A	XM_002719813	ACADS	Acyl-CoA dehydrogenase, C-2 to C-3 short chain
A12	N/A	XM_002722594	ACADSB	Acyl-CoA dehydrogenase, short/branched chain
A13	Ocu.2616	XM_002715038	ACAT1	Acetyl-CoA acetyltransferase 1
A14	N/A	XM_002719663	ACOT1	Acyl-CoA thioesterase 1
A15	N/A	XM_002713909	ACOT12	Acyl-CoA thioesterase 12
A16	N/A	XM_002719964	ACOT9	Acyl-CoA thioesterase 9
A17	N/A	XM_002722933	ACOX1	Acyl-CoA oxidase 1, palmitoyl
A18	Ocu.3294	NM_001082763	ACOX2	Acyl-CoA oxidase 2, branched chain
A19	Ocu.3296	NM_001082624	ADH5	Alcohol dehydrogenase 5 (class III), chi polypeptide
A20	Ocu.2134	NM_001082205	AHR	Aryl hydrocarbon receptor
A21	Ocu.2180	XM_002716457	AHSG	Alpha-2-HS-glycoprotein
A22	N/A	XM_002720290	AIFM1	Apoptosis-inducing factor, mitochondrion-associated, 1
A23	N/A	XM_002717648	AKT3	V-akt murine thymoma viral oncogene homolog 3 (protein kinase B, gamma)
A24	Ocu.3074	NM_001082344	ALB	Albumin
B01	Ocu.1307	NM_001082013	ALDH1A1	Aldehyde dehydrogenase 1 family, member A1
B02	N/A	XM_002719770	ALDH2	Aldehyde dehydrogenase 2 family (mitochondrial)
B03	Ocu.864	NM_001082238	ALDOA	Aldolase A, fructose-bisphosphate
B04	N/A	XM_002711526	AMFR	Autocrine motility factor receptor, E3 ubiquitin protein ligase
B05	Ocu.2359	NM_001081990	AOX1	Aldehyde oxidase 1
B06	Ocu.7679	NM_001171409	APOA5	Apolipoprotein A-V
B07	Ocu.6224	NM_001082643	APOE	Apolipoprotein E
B08	Ocu.2189	XM_002713474	AQP4	Aquaporin 4
B09	N/A	XM_002715243	ATF6	Activating transcription factor 6
B10	Ocu.1019	NM_001171421	ATP5O	ATP synthase, H ⁺ transporting, mitochondrial F1 complex, O subunit
B11	N/A	XM_002713627	ATP8B1	ATPase, aminophospholipid transporter, class I, type 8B, member 1
B12	N/A	XM_002716589	ATR	Ataxia telangiectasia and Rad3 related
B13	N/A	XM_002720223	ATRX	Alpha thalassemia/mental retardation syndrome X-linked
B14	N/A	XM_002711237	AVPR1A	Arginine vasopressin receptor 1A
B15	Ocu.2468	NM_001082135	BCL2L1	BCL2-like 1
B16	N/A	XM_002712479	BCS1L	BCS1-like (S. cerevisiae)
B17	N/A	XM_002708577	BIRC2	Baculoviral IAP repeat containing 2
B18	N/A	XM_002719175	BRCA1	Breast cancer 1, early onset
B19	Ocu.1841	NM_001082286	C3	Complement component 3
B20	Ocu.2269	NM_001082346	C9	Complement component 9
B21	Ocu.1840	NM_001082235	CALR	Calreticulin
B22	N/A	XM_002721303	CANX	Calnexin
B23	Ocu.1954	NM_001195722	CAPN2	Calpain 2, (m/II) large subunit
B24	Ocu.2353	NM_001082059	CAPN3	Calpain 3, (p94)
C01	Ocu.2659	NM_001082117	CASP3	Caspase 3, apoptosis-related cysteine peptidase
C02	N/A	XM_002714583	CASP8AP2	Caspase 8 associated protein 2

Position	UniGene	GenBank	Symbol	Description
C03	N/A	XM_002709045	CAT	Catalase
C04	Ocu.1921	NM_001082294	CCL2	Chemokine (C-C motif) ligand 2
C05	Ocu.6498	XM_002712830	CCND1	Cyclin D1
C06	Ocu.549	NM_001142262	CCT2	Chaperonin containing TCP1, subunit 2 (beta)
C07	Ocu.3119	XM_002715377	CCT3	Chaperonin containing TCP1, subunit 3 (gamma)
C08	Ocu.2206	NM_001082039	CCT6A	Chaperonin containing TCP1, subunit 6A (zeta 1)
C09	Ocu.6255	NM_001142260	CCT7	Chaperonin containing TCP1, subunit 7 (eta)
C10	Ocu.2565	XM_002712016	CD36	CD36 molecule (thrombospondin receptor)
C11	Ocu.1843	NM_001082313	CD4	CD4 molecule
C12	Ocu.7518	XM_002709048	CD44	CD44 molecule (Indian blood group)
C13	Ocu.3057	NM_001082663	CD80	CD80 molecule
C14	Ocu.3058	NM_001082208	CD86	CD86 molecule
C15	N/A	XM_002712531	CFLAR	CASP8 and FADD-like apoptosis regulator
C16	Ocu.2320	NM_001082681	COX-1	Cyclooxygenase-1
C17	Ocu.6273	NM_001170882	COX4I1	Cytochrome c oxidase subunit IV isoform 1
C18	N/A	XM_002715617	CPT2	Carnitine palmitoyltransferase 2
C19	N/A	XM_002713837	CROT	Carnitine O-octanoyltransferase
C20	Ocu.6584	NM_001082406	CRYAA	Crystallin, alpha A
C21	Ocu.6416	NM_001082407	CRYAB	Crystallin, alpha B
C22	Ocu.1849	NM_001082278	CRYL1	Crystallin, lambda 1
C23	N/A	XM_002711075	CS	Citrate synthase
C24	Ocu.2222	NM_001082244	CTSE	Cathepsin E
D01	Ocu.2621	NM_001082099	CYBA	P22-phox
D02	Ocu.2622	NM_001082100	CYBB	Cytochrome b-245 beta polypeptide
D03	Ocu.2032	NM_001170929	CYP7A1	Cytochrome P450, family 7, subfamily A, polypeptide 1
D04	N/A	XM_002708255	DAPK1	Death-associated protein kinase 1
D05	N/A	XM_002721023	DDB1	Damage-specific DNA binding protein 1, 127kDa
D06	N/A	XM_002709089	DDB2	Damage-specific DNA binding protein 2, 48kDa
D07	N/A	XM_002708446	DLAT	Dihydrolipoamide S-acetyltransferase
D08	N/A	XM_002722260	DNAJA3	DnaJ (Hsp40) homolog, subfamily A, member 3
D09	N/A	XM_002716458	DNAJB11	DnaJ (Hsp40) homolog, subfamily B, member 11
D10	N/A	XM_002712324	DNAJC10	DnaJ (Hsp40) homolog, subfamily C, member 10
D11	N/A	XM_002715942	DNAJC6	DnaJ (Hsp40) homolog, subfamily C, member 6
D12	N/A	XM_002717902	DUOX1	Dual oxidase 1
D13	N/A	XM_002717905	DUOX2	Dual oxidase 2
D14	N/A	XM_002716262	EIF2A	Eukaryotic translation initiation factor 2A, 65kDa
D15	N/A	XM_002716143	ENO1	Enolase 1, (alpha)
D16	Ocu.6248	NM_001082275	EPHX1	Epoxide hydrolase 1, microsomal (xenobiotic)
D17	N/A	XM_002719272	EPX	Eosinophil peroxidase
D18	N/A	XM_002723615	ERCC2	Excision repair cross-complementing rodent repair deficiency, complementation group 2
D19	N/A	XM_002712415	ERCC3	Excision repair cross-complementing rodent repair deficiency, complementation group 3
D20	N/A	XM_002711758	ERCC4	Excision repair cross-complementing rodent repair deficiency, complementation group 4
D21	Ocu.5488	XM_002713018	ERCC5	Excision repair cross-complementing rodent repair deficiency, complementation group 5
D22	N/A	XM_002714053	ERCC8	Excision repair cross-complementing rodent repair deficiency, complementation group 8
D23	Ocu.2354	NM_001081995	FAS	Fas (TNF receptor superfamily, member 6)
D24	N/A	XM_002721018	FEN1	Flap structure-specific endonuclease 1
E01	Ocu.1887	NM_001082285	FMO1	Flavin containing monooxygenase 1
E02	Ocu.1821	NM_001082246	FMO3	Flavin containing monooxygenase 3
E03	Ocu.1946	NM_001082284	FMO4	Flavin containing monooxygenase 4
E04	Ocu.1864	NM_001082245	FMO5	Flavin containing monooxygenase 5
E05	Ocu.1880	NM_001082315	FRP	Ferritin repressor protein
E06	Ocu.7567	NM_001171382	G6PD	Glucose-6-phosphate dehydrogenase
E07	N/A	XM_002712143	GALNT5	UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 5 (GalNAc-T5)
E08	N/A	XM_002724235	GCDH	Glutaryl-CoA dehydrogenase
E09	Ocu.5412	XM_002714508	GCLC	Glutamate-cysteine ligase, catalytic subunit
E10	Ocu.6208	NM_001085444	GPX1	Glutathione peroxidase 1
E11	N/A	NM_001256893	GPX2	Glutathione peroxidase 2 (gastrointestinal)
E12	N/A	NM_001256900	GPX3	Glutathione peroxidase 3 (plasma)
E13	N/A	XM_002714264	GPX5	Glutathione peroxidase 5 (epididymal androgen-related protein)
E14	N/A	NM_001256906	GPX6	Glutathione peroxidase 6 (olfactory)
E15	N/A	NM_001256904	GPX7	Glutathione peroxidase 7
E16	N/A	XM_002716660	GSK3B	Glycogen synthase kinase 3 beta
E17	Ocu.2029	NM_001082252	GSTM2	Glutathione S-transferase mu 2 (muscle)
E18	N/A	XM_002709814	HADHA	Hydroxyacyl-CoA dehydrogenase/3-ketoacyl-CoA thiolase/enoyl-CoA hydratase (trifunctional protein), alpha subunit

Position	UniGene	GenBank	Symbol	Description
E19	N/A	XM_002709709	HK2	Hexokinase 2
E20	Ocu.7688	NM_001171399	HOXA3	Homeobox A3
E21	N/A	XM_002722216	HPN	Hepsin
E22	Ocu.3101	NM_001082760	HPX	Hemopexin
E23	Ocu.2274	XM_002716347	HRG	Histidine-rich glycoprotein
E24	N/A	XM_002724382	HSF1	Heat shock transcription factor 1
F01	N/A	XM_002714792	HSF2	Heat shock transcription factor 2
F02	N/A	XM_002714283	HSPA1A	Heat shock 70kDa protein 1A
F03	N/A	XM_002719559	HSPA2	Heat shock 70kDa protein 2
F04	N/A	XM_002716812	HSPBAP1	HSPB (heat shock 27kDa) associated protein 1
F05	N/A	XM_002712368	HSPD1	Heat shock 60kDa protein 1 (chaperonin)
F06	N/A	XM_002720572	HSPH1	Heat shock 105kDa/110kDa protein 1
F07	N/A	XM_002709712	HTRA2	HtrA serine peptidase 2
F08	N/A	XM_002712618	IDH1	Isocitrate dehydrogenase 1 (NADP+), soluble
F09	N/A	XM_002721491	IDH2	Isocitrate dehydrogenase 2 (NADP+), mitochondrial
F10	Ocu.6024	NM_001171363	IDH3G	Isocitrate dehydrogenase 3 (NAD+) gamma
F11	Ocu.2149	NM_001081991	IFNG	Interferon, gamma
F12	Ocu.7560	NM_001171494	IKBKKG	Inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma
F13	Ocu.1796	NM_001082045	IL10	Interleukin 10
F14	Ocu.2080	NM_001101684	IL1A	Interleukin 1, alpha
F15	Ocu.1993	NM_001082201	IL1B	Interleukin 1, beta
F16	Ocu.2461	NM_001163180	IL2	Interleukin 2
F17	Ocu.2462	NM_001163177	IL4	Interleukin 4
F18	Ocu.2447	NM_001082064	IL6	Interleukin 6 (interferon, beta 2)
F19	N/A	XM_002714044	IL6ST	Interleukin 6 signal transducer (gp130, oncostatin M receptor)
F20	N/A	XM_002710971	JAG1	Jagged 1
F21	N/A	XM_002711121	KRT8	Keratin 8
F22	N/A	XM_002718232	L2HGDH	L-2-hydroxyglutarate dehydrogenase
F23	Ocu.1920	XM_002723277	LDLR	Low density lipoprotein receptor
F24	Ocu.2625	XM_002718780	LOC100008833	Inducible nitric oxide synthase
G01	Ocu.2191	NM_001082148	LOC100008892	PPAR gamma 3
G02	Ocu.4906	XM_002711230	LOC100009456	Glucose-regulated protein GRP94
G03	Ocu.6997	XM_002712189	LOC100101571	Mitochondrial glycerol-3-phosphate dehydrogenase 2
G04	Ocu.7150	NM_001099966	LOC100101580	Caspase-10
G05	Ocu.7184	XM_002708417	LOC100101588	Caspase 1
G06	Ocu.7180	XM_002718715	LOC100101591	Caspase 7
G07	Ocu.7179	XM_002722329	LOC100101592	Caspase 9
G08	Ocu.6673	XM_002709436	LOC100101593	Cathepsin B
G09	Ocu.7371	XM_002717913	LOC100144341	Mitochondrial phosphoenolpyruvate carboxykinase
G10	Ocu.2041	NM_001171072	LOC100328613	Polycyclic hydrocarbon-inducible cytochrome P450c
G11	Ocu.1943	NM_001171121	LOC100328937	Cytochrome P450 LM4
G12	N/A	XM_002720803	LOC100338094	HtrA serine peptidase 4-like
G13	N/A	XM_002716261	LOC100338164	Stress-associated endoplasmic reticulum protein 1-like
G14	N/A	XM_002709339	LOC100338209	N-acylsphingosine amidohydrolase 1
G15	N/A	XM_002720915	LOC100338439	DNA-damage-inducible transcript 3
G16	N/A	XM_002721722	LOC100338694	Heat shock 90kDa protein 1, beta
G17	N/A	XM_002712679	LOC100338814	Dynamin 1-like
G18	N/A	XM_002721235	LOC100338853	Acyl-coenzyme A thioesterase 8-like
G19	Ocu.7772	XM_002721656	LOC100338858	Succinate dehydrogenase complex, subunit D
G20	N/A	XM_002710371	LOC100339056	Forkhead box I1

Position	UniGene	GenBank	Symbol	Description
G21	N/A	XM_002709255	LOC100339131	Pyruvate carboxylase
G22	N/A	XM_002722320	LOC100339192	Glycogen synthase kinase 3 alpha
G23	N/A	XM_002710838	LOC100339381	Proliferating cell nuclear antigen-like
G24	N/A	XM_002711396	LOC100339383	Cyclic AMP-dependent transcription factor ATF-4-like
H01	N/A	XM_002715960	LOC100339404	24-dehydrocholesterol reductase
H02	N/A	XM_002711098	LOC100339469	Glycerol-3-phosphate dehydrogenase 1-like
H03	N/A	XM_002710374	LOC100339714	Kv channel interacting protein 1
H04	Ocu.7998	NM_001199229	LOC100339860	Resistin
H05	N/A	XM_002718628	LOC100339928	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 2
H06	N/A	XM_002708583	LOC100340120	Baculoviral IAP repeat-containing protein 3-like
H07	Ocu.7796	NM_001177330	LOC100340171	Lipoprotein lipase-like
H08	N/A	XM_002713025	LOC100340318	DNA ligase (ATP) 4-like
H09	N/A	XM_002719218	LOC100340527	WD repeat domain, phosphoinositide interacting 1-like
H10	N/A	XM_002718767	LOC100341040	Mitochondrial short-chain enoyl-coenzyme A hydratase 1-like
H11	N/A	XM_002714812	LOC100341181	DnaJ (Hsp40) homolog, subfamily B, member 6
H12	N/A	XM_002710000	LOC100341248	POU class 3 homeobox 3
H13	N/A	XM_002711274	LOC100341256	Succinate dehydrogenase complex, subunit D-like
H14	N/A	XM_002723919	LOC100341327	Carnitine palmitoyltransferase 1C-like
H15	N/A	XM_002710299	LOC100341336	GrpE-like 1, mitochondrial-like
H16	N/A	XM_002710907	LOC100341339	Beta-neoendorphin-dynorphin
H17	N/A	XM_002709844	LOC100341412	Cytosolic malate dehydrogenase
H18	N/A	XM_002717140	LOC100341546	Caspase 6
H19	N/A	XM_002710776	LOC100341850	Mannosidase, beta A, lysosomal-like
H20	N/A	XM_002713724	LOC100341867	Heat shock 10kDa protein 1
H21	N/A	XM_002713861	LOC100341946	Glucokinase
H22	N/A	XM_002714580	LOC100342046	BCL2-antagonist/killer 1-like
H23	N/A	XM_002710910	LOC100342113	Isocitrate dehydrogenase 3, beta subunit
H24	N/A	XM_002720515	LOC100342334	Fas ligand (TNF superfamily, member 6)-like
I01	N/A	XM_002722939	LOC100342500	Growth factor receptor-bound protein 2
I02	N/A	XM_002719585	LOC100342993	Acyl-CoA thioesterase 6-like
I03	N/A	XM_002720556	LOC100343167	Sterol-C4-methyl oxidase-like
I04	N/A	XM_002723661	LOC100343272	Ubiquitin-conjugating enzyme E2G 2
I05	N/A	XM_002710505	LOC100343291	Cytochrome P450, family 7, subfamily B, polypeptide 1-like
I06	N/A	XM_002712578	LOC100343648	Peroxisomal trans-2-enoyl-CoA reductase
I07	N/A	XM_002711667	LOC100343715	NAD(P)H dehydrogenase, quinone 1-like
I08	N/A	XM_002718291	LOC100343	Methylmalonyl CoA epimerase-like

Position	UniGene	GenBank	Symbol	Description
			924	
I09	N/A	XM_002713970	LOC100344233	NADH dehydrogenase (ubiquinone) Fe-S protein 4
I10	N/A	XM_002714992	LOC100344329	Peroxiredoxin 6
I11	N/A	XM_002711534	LOC100344470	Homocysteine-inducible, endoplasmic reticulum stress-inducible, ubiquitin-like domain member 1
I12	N/A	XM_002717204	LOC100344675	3-hydroxybutyrate dehydrogenase, type 2
I13	N/A	XM_002711175	LOC100344720	Apolipoprotein F-like
I14	N/A	XM_002714088	LOC100344828	Glycerol kinase 2
I15	N/A	XM_002723607	LOC100344884	Patatin-like phospholipase domain containing 3
I16	N/A	XM_002723219	LOC100345293	DnaJ (Hsp40) homolog, subfamily B, member 1-like
I17	N/A	XM_002708031	LOC100345469	BCL2-associated athanogene
I18	N/A	XM_002722446	LOC100345546	ER degradation enhancer, mannosidase alpha-like 3-like
I19	N/A	XM_002714030	LOC100345592	Heat shock 27kDa protein 3
I20	N/A	XM_002719842	LOC100345623	Monoamine oxidase A-like
I21	N/A	XM_002721863	LOC100345802	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit f-like
I22	N/A	XM_002718649	LOC100346046	Stearoyl-CoA desaturase-like
I23	N/A	XM_002723507	LOC100346167	Dodecenoyl-Coenzyme A delta isomerase-like
I24	N/A	XM_002716469	LOC100346381	Enoyl-Coenzyme A, hydratase/3-hydroxyacyl Coenzyme A dehydrogenase-like
J01	N/A	XM_002708035	LOC100346508	DnaJ (Hsp40) homolog, subfamily A, member 1
J02	N/A	XM_002710397	LOC100346522	Tumor necrosis factor, alpha-induced protein 8-like
J03	N/A	XM_002718651	LOC100346561	Stearoyl-CoA desaturase 1
J04	N/A	XM_002722221	LOC100346670	Cytochrome c oxidase subunit VIb polypeptide 1-like
J05	N/A	XM_002710398	LOC100346781	Hydroxysteroid (17-beta) dehydrogenase 4
J06	N/A	XM_002715138	LOC100347160	Peroxiredoxin 1
J07	N/A	XM_002708038	LOC100347288	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 6
J08	N/A	XM_002716764	LOC100347590	Heat shock protein 70kDa family, member 13-like
J09	N/A	XM_002717726	LOC100347767	Tumor necrosis factor, alpha-induced protein 8-like 3-like
J10	N/A	XM_002722225	LOC100347944	Heat shock protein, alpha-crystallin-related, B6
J11	N/A	XM_002718305	LOC100348170	ERO1-like
J12	N/A	XM_002714669	LOC100348489	Cyclin-dependent kinase inhibitor 1A
J13	N/A	XM_002723787	LOC100348536	BCL2/adenovirus E1B 19kD-interacting protein 3-like
J14	N/A	XM_002723618	LOC100348713	Excision repair cross-complementing 1 isoform 2-like
J15	N/A	XM_002722959	LOC100348952	BCL2-related protein A1
J16	Ocu.835	XM_002721199	LOC100349106	CD40 antigen
J17	N/A	XM_002709216	LOC100349561	APAF1 interacting protein-like
J18	N/A	XM_002709955	LOC100349987	Mpv17 protein
J19	N/A	XM_002723101	LOC100350130	X-ray repair complementing defective repair in Chinese hamster cells 1-like

Position	UniGene	GenBank	Symbol	Description
J20	N/A	XM_002709798	LOC100350232	Peroxisredoxin 1-like
J21	N/A	XM_002714332	LOC100350256	Mitochondrial ribosomal protein S18B
J22	N/A	XM_002724334	LOC100350316	Ubiquitin conjugating enzyme E2, J2
J23	N/A	XM_002724013	LOC100350626	Derlin 3
J24	N/A	XM_002711686	LOC100350815	Thioredoxin-like 4B-like
K01	N/A	XM_002721564	LOC100350952	DnaJ subfamily A member 2
K02	N/A	XM_002723390	LOC100350964	Spermatogenesis associated 2
K03	N/A	XM_002717867	LOC100351185	Poly (ADP-ribose) polymerase family, member 2-like
K04	N/A	XM_002714947	LOC100351261	Estrogen receptor alpha-like
K05	N/A	XM_002721748	LOC100351616	Integrin, alpha X (complement component 3 receptor 4 subunit-like
K06	N/A	XM_002709962	LOC100351729	Ketohexokinase
K07	N/A	XM_002709739	LOC100351818	3-hydroxyanthranilate 3,4-dioxygenase
K08	N/A	XM_002717103	LOC100352092	Starch binding domain 1-like
K09	N/A	XM_002710572	LOC100352241	2,4-dienoyl CoA reductase 1
K10	N/A	XM_002723799	LOC100352309	DnaJ (Hsp40) homolog, subfamily C, member 5-like
K11	N/A	XM_002723395	LOC100352375	Junctophilin 3
K12	N/A	XM_002721389	LOC100352714	Aconitase 2, mitochondrial
K13	N/A	XM_002719193	LOC100352792	Coiled-coil domain containing 103
K14	N/A	XM_002708055	LOC100353137	Interferon type I-like
K15	N/A	XM_002723234	LOC100353138	Carnitine palmitoyltransferase 1B
K16	N/A	XM_002715933	LOC100353284	Growth arrest and DNA-damage-inducible, alpha-like
K17	N/A	XM_002722064	LOC100353481	Fumarate hydratase
K18	N/A	XM_002721395	LOC100354135	E1A binding protein p300-like
K19	N/A	XM_002722753	LOC100354142	Catechol-O-methyltransferase-like
K20	N/A	XM_002714285	LOC100354435	Heat shock protein 70.2-like
K21	N/A	XM_002711905	LOC100354523	Heat shock protein beta-1
K22	N/A	XM_002714344	LOC100354614	Tripartite motif-containing 10-like
K23	N/A	XM_002709637	LOC100354672	Fatty acid binding protein 1, liver
K24	N/A	XM_002716151	LOC100354701	Acyl-CoA thioesterase 7
L01	N/A	XM_002719999	LOC100354726	Glycerol kinase-like
L02	N/A	XM_002709590	LOC100354847	Eukaryotic translation initiation factor 2-alpha kinase 3-like
L03	N/A	XM_002718056	LOC100355071	Organic solute transporter beta
L04	N/A	XM_002720579	LOC100355331	BRCA2-like
L05	N/A	XM_002709101	LOC100355349	NADH dehydrogenase (ubiquinone) Fe-S protein 3
L06	N/A	XM_002712551	LOC100355449	Malate dehydrogenase, cytoplasmic-like
L07	N/A	XM_002720716	LOC100355	Esterase D/formylglutathione hydrolase-like

Position	UniGene	GenBank	Symbol	Description
			655	
L08	N/A	XM_002723696	LOC100355675	BCL2-associated X protein
L09	N/A	XM_002722547	LOC100355991	BH3 interacting domain death agonist-like
L10	N/A	XM_002717290	LOC100356058	Lysozyme-like 1-like
L11	N/A	XM_002711014	LOC100356360	Prefoldin subunit 5
L12	Ocu.2226	XM_002723354	LOC100356422	Peroxisome proliferative activated receptor, alpha
L13	N/A	XM_002724113	LOC100356525	Nuclear protein localization 4
L14	N/A	XM_002720720	LOC100356660	Nudix-type motif 15-like
L15	N/A	XM_002719872	LOC100357007	Monoamine oxidase B-like
L16	N/A	XM_002723248	LOC100357709	Serpin peptidase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 3-like
L17	N/A	XM_002717450	LOC100357764	Protein phosphatase 1, regulatory subunit 15B-like
L18	N/A	XM_002717983	LOC100357766	Bcl2 modifying factor
L19	Ocu.6789	XM_002710624	LOC100357982	X-box binding protein 1 isoform XBP1(S)-like
L20	N/A	XM_002718689	LOC100358030	BCL2-associated athanogene 3
L21	N/A	XM_002710201	LOC100358075	Interleukin-5-like
L22	N/A	XM_002724403	LOC100358238	Trefoil factor 1-like
L23	N/A	NM_001256781	LOC100358388	CD40 ligand
L24	N/A	XM_002712562	LOC100358521	Long-chain acyl-CoA dehydrogenase-like
M01	N/A	XM_002724450	LOC100358587	BCL2-associated agonist of cell death-like
M02	N/A	XM_002710092	LOC100358676	Interleukin 13 (predicted)-like
M03	N/A	XM_002708418	LOC100359184	Caspase-4-like
M04	N/A	XM_002708700	LOC100359188	Uncoupling protein 2
M05	N/A	XM_002715585	LOC100359222	Myeloid cell leukemia sequence 1
M06	N/A	XM_002716313	LOC100359311	SEC62 homolog
M07	N/A	XM_002716861	LOC100359315	Lanosterol synthase
M08	N/A	XM_002719269	LPO	Lactoperoxidase
M09	N/A	XM_002716119	MAP3K6	Mitogen-activated protein kinase kinase kinase 6
M10	N/A	XM_002722670	MAPK8	Mitogen-activated protein kinase 8
M11	N/A	XM_002721307	MAPK9	Mitogen-activated protein kinase 9
M12	N/A	XM_002711906	MDH2	Malate dehydrogenase 2, NAD (mitochondrial)
M13	N/A	XM_002721248	MKI67	Antigen identified by monoclonal antibody Ki-67
M14	N/A	XM_002716167	MLH1	MutL homolog 1, colon cancer, nonpolyposis type 2 (E. coli)
M15	N/A	XM_002719094	MPO	Myeloperoxidase
M16	N/A	XM_002708627	MRE11A	MRE11 meiotic recombination 11 homolog A (S. cerevisiae)
M17	N/A	XM_002709880	MSH6	MutS homolog 6 (E. coli)
M18	N/A	XM_002710755	MTBP	Mdm2, transformed 3T3 cell double minute 2, p53 binding protein (mouse) binding protein, 104kDa
M19	N/A	XM_002716956	MTTP	Microsomal triglyceride transfer protein
M20	N/A	XM_002714489	MUT	Methylmalonyl CoA mutase
M21	Ocu.2620	NM_001082102	NCF1	Neutrophil cytosolic factor 1
M22	Ocu.2623	NM_001082101	NCF2	Neutrophil cytosolic factor 2
M23	N/A	XM_002708641	NOX4	NADPH oxidase 4
M24	Ocu.2608	NM_001082726	NR1H4	Nuclear receptor subfamily 1, group H, member 4
N01	Ocu.3050	XM_002717676	NR5A2	Nuclear receptor subfamily 5, group A, member 2
N02	N/A	XM_002715340	NUP210L	Nucleoporin 210kDa-like
N03	N/A	XM_002713849	OGDH	Oxoglutarate (alpha-ketoglutarate) dehydrogenase (lipoamide)
N04	N/A	XM_002720942	OS9	Osteosarcoma amplified 9, endoplasmic reticulum lectin

Position	UniGene	GenBank	Symbol	Description
N05	Ocu.3331	XM_002716536	OSTALPA	Organic solute transporter alpha
N06	Ocu.3381	NM_001171315	PDIA3	Protein disulfide isomerase family A, member 3
N07	N/A	XM_002713691	PKK4	Pyruvate dehydrogenase kinase, isozyme 4
N08	N/A	XM_002723075	PMS2	PMS2 postmeiotic segregation increased 2 (S. cerevisiae)
N09	Ocu.1952	NM_001082297	PON1	Paraoxonase 1
N10	Ocu.2197	NM_001160290	POR	P450 (cytochrome) oxidoreductase
N11	N/A	XM_002709377	PPARGC1A	Peroxisome proliferator-activated receptor gamma, coactivator 1 alpha
N12	Ocu.6197	NM_001082057	PPIA	Peptidylprolyl isomerase A (cyclophilin A)
N13	N/A	XM_002720546	PPID	Peptidylprolyl isomerase D
N14	N/A	XM_002716320	PRKCSH	Protein kinase C substrate 80K-H
N15	Ocu.7333	XM_002710468	PRKDC	Protein kinase, DNA-activated, catalytic polypeptide
N16	Ocu.2173	NM_001082388	PTGS2	Prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase)
N17	N/A	XM_002717662	PTPRC	Protein tyrosine phosphatase, receptor type, C
N18	Ocu.7726	NM_001171117	PVR	Poliovirus receptor
N19	Ocu.2087	NM_001082184	PYGM	Phosphorylase, glycogen, muscle
N20	Ocu.1987	XM_002715393	RAB25	RAB25, member RAS oncogene family
N21	Ocu.2212	NM_001082024	RAD51	RAD51 homolog (S. cerevisiae)
N22	N/A	XM_002708471	RDX	Radixin
N23	Ocu.5093	XM_002713159	RPN1	Ribophorin I
N24	N/A	XM_002723194	SDHA	Succinate dehydrogenase complex, subunit A, flavoprotein (Fp)
O01	N/A	XM_002723860	SDHB	Succinate dehydrogenase complex, subunit B, iron sulfur (Ip)
O02	Ocu.3937	NM_001171321	SEC63	SEC63 homolog (S. cerevisiae)
O03	N/A	XM_002719616	SEL1L	Sel-1 suppressor of lin-12-like (C. elegans)
O04	Ocu.3659	NM_001199846	SEPP1	Selenoprotein P, plasma, 1
O05	Ocu.2301	XM_002722823	SERPINE1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
O06	Ocu.2328	NM_001082768	SLC10A1	Solute carrier family 10 (sodium/bile acid cotransporter family), member 1
O07	Ocu.2416	XM_002712761	SLC2A3	Solute carrier family 2 (facilitated glucose transporter), member 3
O08	N/A	XM_002712729	SLC01A2	Solute carrier organic anion transporter family, member 1A2
O09	N/A	XM_002708758	SMPD1	Sphingomyelin phosphodiesterase 1, acid lysosomal
O10	Ocu.2588	NM_001082627	SOD1	Superoxide dismutase 1, soluble
O11	Ocu.3290	NM_001082632	SOD3	Superoxide dismutase 3, extracellular
O12	Ocu.2542	XM_002721384	SREBP-2	Sterol regulatory element binding protein-2
O13	N/A	XM_002720719	SUCLA2	Succinate-CoA ligase, ADP-forming, beta subunit
O14	N/A	XM_002713297	SUCLG2	Succinate-CoA ligase, GDP-forming, beta subunit
O15	N/A	XM_002721813	SYCP2	Synaptonemal complex protein 2
O16	N/A	XM_002711358	SYT1	Synaptotagmin I
O17	Ocu.6289	XM_002708381	TAGLN	Transgelin
O18	Ocu.5905	NM_001163114	TCP1	T-complex 1
O19	Ocu.2133	XM_002722312	TGFB1	Transforming growth factor, beta 1
O20	N/A	XM_002716012	TMEM57	Transmembrane protein 57
O21	Ocu.1971	NM_001082263	TNF	Tumor necrosis factor
O22	Ocu.7591	NM_001171296	TNFAIP8L2	Tumor necrosis factor, alpha-induced protein 8-like 2
O23	Ocu.7986	XM_002710603	TNFRSF11B	Tumor necrosis factor receptor superfamily, member 11b
O24	Ocu.1779	NM_001082404	TP53	Tumor protein p53
P01	N/A	XM_002715643	TXNIP	Thioredoxin interacting protein
P02	N/A	NM_001256962	TXNRD1	Thioredoxin reductase 1
P03	N/A	XM_002722754	TXNRD2	Thioredoxin reductase 2
P04	N/A	XM_002720035	UBQLN2	Ubiquilin 2
P05	Ocu.2093	NM_001171077	UCP1	Uncoupling protein 1 (mitochondrial, proton carrier)
P06	Ocu.6431	NM_001195805	UGT2C1	UDP-glucuronosyltransferase
P07	N/A	XM_002708010	VCP	Valosin containing protein
P08	Ocu.7579	NM_001171325	XIAP	X-linked inhibitor of apoptosis
P09	N/A	XM_002713177	XPC	Xeroderma pigmentosum, complementation group C
P10	N/A	XM_002712463	XRCC5	X-ray repair complementing defective repair in Chinese hamster cells 5 (double-strand-break rejoining)
P11	Ocu.2090	NM_001101682	ACTA2	Actin, alpha 2, smooth muscle, aorta
P12	Ocu.734	NM_001101683	ACTB	Actin, beta
P13	Ocu.87	NM_001082253	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
P14	Ocu.1108	NM_001082277	LDHA	Lactate dehydrogenase A
P15	N/A	XM_002723383	LOC100346936	Non-POU domain containing, octamer-binding-like
P16	N/A	SA_00511	NGDC	Rabbit Genomic DNA Contamination
P17	N/A	SA_00511	NGDC	Rabbit Genomic DNA Contamination
P18	N/A	SA_00511	NGDC	Rabbit 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

Position	UniGene	GenBank	Symbol	Description
P24	N/A	SA_00103	PPC	Positive PCR Control

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For optimal performance, RT² Profiler PCR Arrays should be used together with the RT² First Strand Kit for cDNA synthesis and RT² SYBR[®] Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
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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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