

RT² Profiler PCR Array (Rotor-Gene® Format)

Pig Autophagy PCR Array

Cat. no. 330231 PASS-084ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Pig Autophagy RT² Profiler PCR Array profiles the expression of 84 key genes involved in autophagy, an intracellular catabolic process that destroys a cell's own damaged proteins and organelles via the lysosome. Autophagy has been shown to play roles in a wide variety of normal physiological processes including energy metabolism, organelle turnover, growth regulation, and aging. Impaired autophagy can lead to diseases such as cardiomyopathy and cancer. The array includes genes that encode components of the molecular machinery and key regulators modulating autophagy in response to both extracellular and intracellular signals. A set of controls present on each array enables data analysis using the $\Delta\Delta CT$ method of relative quantification and assessment of reverse transcription performance, genomic DNA contamination, and PCR performance. Using real-time PCR, you can easily and reliably analyze the expression of a focused panel of genes involved in autophagy with this array.

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

Shipping and storage

RT² Profiler PCR Arrays in the Rotor-Gene format 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.



Sample & Assay Technologies

Array layout

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc™ (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance.

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Ssc.19672	NM_001159776	AKT1	V-akt murine thymoma viral oncogene homolog 1
A02	N/A	XM_003122844	AMBRA1	Activating molecule in BECN1-regulated autophagy protein 1-like
A03	Ssc.14258	NM_214372	APP	Amyloid beta (A4) precursor protein
A04	Ssc.75766	NM_001190281	ATG10	ATG10 autophagy related 10 homolog (S. cerevisiae)
A05	Ssc.55826	NM_001190282	ATG12	ATG12 autophagy related 12 homolog (S. cerevisiae)
A06	Ssc.50040	NM_001190272	ATG16L1	ATG16 autophagy related 16-like 1 (S. cerevisiae)
A07	Ssc.51904	XM_003129622	ATG16L2	ATG16 autophagy related 16-like 2 (S. cerevisiae)
A08	Ssc.7402	XM_003132682	ATG3	Autophagy-related 3
A09	Ssc.1455	XM_005657911	ATG4A	Autophagy related 4A, cysteine peptidase
A10	Ssc.6320	NM_001190283	ATG4B	ATG4 autophagy related 4 homolog B (S. cerevisiae)
A11	Ssc.24158	NM_001190284	ATG4C	ATG4 autophagy related 4 homolog C (S. cerevisiae)
A12	Ssc.6142	NM_001123079	ATG4D	ATG4 autophagy related 4 homolog D (S. cerevisiae)
B01	Ssc.83739	NM_001037152	ATG5	ATG5 autophagy related 5 homolog (S. cerevisiae)
B02	Ssc.76220	NM_001190285	ATG7	ATG7 autophagy related 7 homolog (S. cerevisiae)
B03	Ssc.3677	NM_001190275	ATG9A	ATG9 autophagy related 9 homolog A (S. cerevisiae)
B04	Ssc.55409	NM_001190280	ATG9B	ATG9 autophagy related 9 homolog B (S. cerevisiae)
B05	Ssc.80634	XM_003122573	BAD	BCL2-associated agonist of cell death
B06	Ssc.16343	XM_001928147	BAK	Bak protein
B07	Ssc.23470	XM_003355975	BAX	BCL2-associated X protein
B08	Ssc.53633	XM_003121700	BCL2	B-cell CLL/lymphoma 2
B09	Ssc.94302	NM_214285	BCL2L1	BCL2-like 1
B10	Ssc.8408	NM_001044530	BECN1	Beclin 1, autophagy related
B11	Ssc.19150	NM_001030535	BID	BH3 interacting domain death agonist
B12	Ssc.7152	XM_001927592	BNIP3L	BCL2/adenovirus E1B 19kDa interacting protein 3-like
C01	Ssc.15886	NM_214131	CASP3	Caspase 3, apoptosis-related cysteine peptidase
C02	Ssc.30615	NM_001031779	CASP8	Caspase 8, apoptosis-related cysteine peptidase
C03	Ssc.6966	NM_214316	CDKN1B	Cyclin-dependent kinase inhibitor 1B (p27, Kip1)
C04	N/A	XM_005660061	CDKN2A	Cyclin-dependent kinase inhibitor 2A
C05	Ssc.19602	NM_001113051	CLN3	Ceroid-lipofuscinosis, neuronal 3
C06	Ssc.53773	NM_001097458	CTSB	Cathepsin B
C07	Ssc.54663	NM_001037721	CTSD	Cathepsin D
C08	Ssc.55494	XM_005663494	CTSS	Cathepsin S
C09	Ssc.7176	NM_213773	CXCR4	Chemokine (C-X-C motif) receptor 4
C10	N/A	XM_003482803	DAPK1	Death-associated protein kinase 1
C11	Ssc.11601	NM_001185174	DAPL1	Death associated protein-like 1
C12	Ssc.61490	NM_001190286	DRAM1	DNA-damage regulated autophagy modulator 1
D01	Ssc.36467	NM_001243696	DRAM2	DNA-damage regulated autophagy modulator 2
D02	N/A	XM_003124925	EIF2AK3	Eukaryotic translation initiation factor 2-alpha kinase 3
D03	Ssc.47403	NM_001246253	EIF4G1	Eukaryotic translation initiation factor 4 gamma, 1
D04	Ssc.14497	NM_213839	FAS	Fas (TNF receptor superfamily, member 6)
D05	Ssc.44114	XM_003482942	GAA	Glucosidase, alpha; acid
D06	Ssc.81917	NM_001190287	GABARAPL1	GABA(A) receptor-associated protein like 1
D07	Ssc.53995	XM_003126859	GABARAPL2	Gamma-aminobutyric acid receptor-associated protein-like 2-like
D08	N/A	XM_003360315	HDAC6	Histone deacetylase 6
D09	Ssc.43198	NM_213964	HDH	Huntingtin
D10	Ssc.12191	NM_213973	HSP90AA1	90-kDa heat shock protein
D11	Ssc.53746	NM_001243907	HSPA8	Heat shock 70kDa protein 8
D12	Ssc.4093	NM_213948	IFNG	Interferon-gamma
E01	Ssc.16231	NM_214256	IGF1	Insulin-like growth factor 1 (somatomedin C)
E02	Ssc.583	NM_001109772	INS	Insulin
E03	Ssc.16549	NM_001011507	LAMP-1	Lysosome-associated membrane glycoprotein 1
E04	N/A	XM_005667159	LOC100620224	UV radiation resistance-associated gene protein-like
E05	N/A	XM_005659060	LOC102161248	Hepatocyte growth factor-regulated tyrosine kinase substrate-like
E06	Ssc.24271	NM_001170827	MAP1LC3A	Microtubule-associated protein 1 light chain 3 alpha
E07	Ssc.98270	NM_001190290	MAP1LC3B	Microtubule-associated protein 1 light chain 3 beta

Position	UniGene	GenBank	Symbol	Description
E08	Ssc.11018	XM_001929490	MAPK14	Mitogen-activated protein kinase 14
E09	Ssc.83372	XM_003359272	MAPK8	Mitogen-activated protein kinase 8
E10	N/A	XM_005656947	MAPT	Microtubule-associated protein tau
E11	Ssc.101527	XM_003127584	MTOR	Mechanistic target of rapamycin (serine/threonine kinase)
E12	Ssc.17816	NM_001048232	NFKB1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1
F01	Ssc.1533	NM_214322	NPC1	Niemann-Pick disease, type C1
F02	Ssc.13366	NM_001012956	PIK3C3	Phosphoinositide-3-kinase, class 3
F03	N/A	XM_005669881	PIK3CB	Phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit beta
F04	Ssc.82467	NM_213939	PIK3CG	Phosphoinositide-3-kinase, catalytic, gamma polypeptide
F05	N/A	XM_003483123	PIK3R4	Phosphoinositide-3-kinase, regulatory subunit 4
F06	N/A	XM_003360311	PIM2	Serine/threonine-protein kinase pim-2-like
F07	Ssc.21132	XM_005665091	PINK1	PTEN induced putative kinase 1
F08	Ssc.26892	NM_001167633	PRKAA1	Protein kinase, AMP-activated, alpha 1 catalytic subunit
F09	Ssc.24672	NM_001078667	PSEN1	Presenilin 1
F10	Ssc.7652	NM_001143696	PTEN	Phosphatase and tensin homolog
F11	Ssc.6193	NM_001243906	RAB24	RAB24, member RAS oncogene family
F12	N/A	XM_001926853	RB1	Retinoblastoma 1
G01	Ssc.22127	XM_003131671	RPS6KB1	Ribosomal protein S6 kinase, 70kDa, polypeptide 1
G02	Ssc.42721	NM_001037145	SNCA	Synuclein, alpha (non A4 component of amyloid precursor)
G03	N/A	XM_003123639	SQSTM1	Sequestosome-1-like
G04	Ssc.76	NM_214015	TGFB1	Transforming growth factor, beta 1
G05	Ssc.16634	NM_213958	TLR9	Toll-like receptor 9
G06	N/A	XM_005662897	TMEM74	Transmembrane protein 74
G07	Ssc.100	NM_214022	TNF	Tumor necrosis factor
G08	Ssc.12829	NM_001024696	TNFSF10	Tumor necrosis factor (ligand) superfamily, member 10
G09	Ssc.15917	NM_213824	TP53	Tumor protein p53
G10	N/A	XM_001928551	ULK1	Unc-51-like kinase 1 (C. elegans)
G11	N/A	XM_005669261	ULK2	Unc-51 like autophagy activating kinase 2
G12	Ssc.2080	NM_001190294	WIPI1	WD repeat domain, phosphoinositide interacting 1
H01	Ssc.10316	XM_003357928	ACTB	Actin, beta
H02	Ssc.73773	NM_213978	B2M	Beta-2-microglobulin
H03	Ssc.79971	NM_001206359	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Ssc.4158	NM_001032376	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Ssc.17024	NM_001244068	RPL13A	Ribosomal protein L13a
H06	N/A	SA_00133	SGDC	Pig Genomic DNA Contamination
H07	N/A	SA_00104	RTC	Reverse Transcription Control
H08	N/A	SA_00104	RTC	Reverse Transcription Control
H09	N/A	SA_00104	RTC	Reverse Transcription Control
H10	N/A	SA_00103	PPC	Positive PCR Control
H11	N/A	SA_00103	PPC	Positive PCR Control
H12	N/A	SA_00103	PPC	Positive PCR Control

Related products

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.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² SYBR Green ROX [™] FAST Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the Rotor-Gene Q and other Rotor-Gene cyclers	330620

* Larger kit sizes available; please inquire.

RT² Profiler PCR Array products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.

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