RT² Profiler PCR Array (Rotor-Gene® Format)

Rat Insulin Signaling Pathway

Cat. no. 330231 PARN-030ZR

For pathway expression analysis

Format	For use with the following real-time cyclers
RT² Profiler PCR Array, Format R	Rotor-Gene Q, other Rotor-Gene cyclers

Description

The Rat Insulin Signaling Pathway RT² Profiler PCR Array profiles the expression of 84 genes related to insulin-responsive genes. This array represents genes associated with the insulin receptor and target genes for insulin signaling. Genes involved in the metabolism of carbohydrates, lipids, and proteins and other related biological responses are also included. This array contains members of the PI3K and MAPK Pathways as well. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to insulin-responsive 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.

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	Rn.44372	NM_022193	Acaca	Acetyl-coenzyme A carboxylase alpha
A02	Rn.31796	NM_017340	Acox1	Acyl-Coenzyme A oxidase 1, palmitoyl
A03	Rn.11314	NM_024483	Adra1d	Adrenergic, alpha-1D-, receptor
A04	Rn.37157	NM_001100970	Aebp1	AE binding protein 1
A05	Rn.11422	NM_033230	Akt1	V-akt murine thymoma viral oncogene homolog 1
A06	Rn.87066	NM_017093	Akt2	V-akt murine thymoma viral oncogene homolog 2
A07	Rn.10506	NM_031575	Akt3	V-akt murine thymoma viral oncogene homolog 3 (protein kinase B, gamma)
A08	Rn.1714	NM_022532	Araf	V-raf murine sarcoma 3611 viral oncogene homolog
A09	Rn.10323	NM_031535	Bcl2l1	Bcl2-like 1
A10	Rn.205813	XM_231692	Braf	V-raf murine sarcoma viral oncogene homolog B1
A11	Rn.112585	NM_022383	Cap1	CAP, adenylate cyclase-associated protein 1 (yeast)
A12	Rn.35589	XM_576396	Cbl	Cas-Br-M (murine) ecotropic retroviral transforming sequence
B01	Rn.204833	NM_012524	Cebpa	CCAAT/enhancer binding protein (C/EBP), alpha
B02	Rn.6479	NM_024125	Cebpb	CCAAT/enhancer binding protein (C/EBP), beta
B03	Rn.16172	NM_001077642	Cfd	Complement factor D (adipsin)
B04	Rn.117974	NM_001025416	Dok1	Docking protein 1
B05	Rn.126595	NM_001106048	Dok2	Docking protein 2
B06	Rn.19911	NM_001107336	Dok3	Docking protein 3
B07	Rn.25406	NM_001079893	Dusp14	Dual specificity phosphatase 14
B08	Rn.9181	NM_172029	Eif2b1	Eukaryotic translation initiation factor 2B, subunit 1 alpha
B09	Rn.11161	NM_053857	Eif4ebp1	Eukaryotic translation initiation factor 4E binding protein 1
B10	Rn.7320	NM_001106228	Ercc1	Excision repair cross-complementing rodent repair deficiency, complementation group 1
B11	Rn.9486	NM_017332	Fasn	Fatty acid synthase
B12	Rn.33703	NM_012558	Fbp1	Fructose-1,6-bisphosphatase 1
C01	Rn.103750	NM_022197	Fos	FBJ osteosarcoma oncogene
C02	Rn.22182	NM_001108097	Frs2	Fibroblast growth factor receptor substrate 2
C03	Rn.34398	NM_001017382	Frs3	Fibroblast growth factor receptor substrate 3
C04	Rn.10992	NM_013098	G6pc	Glucose-6-phosphatase, catalytic subunit
C05	Rn.1725	NM_001108444	Gab1	GRB2-associated binding protein 1
C06	Rn.54383	NM_012707	Gcg	Glucagon
C07	Rn.10447	NM_012565	Gck	Glucokinase
C08	Rn.44452	NM_022215	Gpd1	Glycerol-3-phosphate dehydrogenase 1 (soluble)
C09	Rn.63942	NM_001109093	Grb10	Growth factor receptor bound protein 10
C10	Rn.3360	NM_030846	Grb2	Growth factor receptor bound protein 2
C11	Rn.10426	NM_032080	Gsk3b	Glycogen synthase kinase 3 beta
C12	Rn.91375	NM_012735	Hk2	Hexokinase 2
D01	Rn.102180	NM_001098241	Hras	Harvey rat sarcoma virus oncogene
D02	Rn.10957	NM_052807	Igf1r	Insulin-like growth factor 1 receptor
D03	Rn.118681	NM_031511	Igf2	Insulin-like growth factor 2
D04	Rn.34026	NM_013144	Igfbp1	Insulin-like growth factor binding protein 1
D05	Rn.962	NM_019129	Ins1	Insulin 1
D06	Rn.989	NM_019130	Ins2	Insulin 2
D07	Rn.48700	NM_053680	Insl3	Insulin-like 3
D08	Rn.9876	NM_017071	Insr	Insulin receptor
D09	Rn.10476	NM_012969	Irs1	Insulin receptor substrate 1
D10	Rn.10718	NM_001168633	Irs2	Insulin receptor substrate 2
D11	Rn.93714	NM_021835	Jun	Jun oncogene
D12	Rn.2398	NM_031135	Klf10	Kruppel-like factor 10
E01	Rn.24554	NM_031515	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
E02	Rn.10483	NM_175762	Ldlr	Low density lipoprotein receptor
E03	Rn.44444	NM_013076	Lep	Leptin
E04	Rn.5850	NM_031643	Map2k1	Mitogen activated protein kinase kinase 1
E05	Rn.34914	NM_053842	Mapk1	Mitogen activated protein kinase 1
E06	Rn.11008	NM_019906	Mtor	Mechanistic target of rapamycin (serine/threonine kinase)
E07	Rn.10400	NM_012611	Nos2	Nitric oxide synthase 2, inducible
E08	Rn.9714	NM_012614	Npy	Neuropeptide Y

Position	UniGene	GenBank	Symbol	Description
E09	Rn.35508	NM_001108377	Pck2	Phosphoenolpyruvate carboxykinase 2 (mitochondrial)
E10	Rn.10905	NM_031081	Pdpk1	3-phosphoinositide dependent protein kinase-1
E11	Rn.44193	NM_133399	Pik3ca	Phosphoinositide-3-kinase, catalytic, alpha polypeptide
E12	Rn.44268	NM_053481	Pik3cb	Phosphoinositide-3-kinase, catalytic, beta polypeptide
F01	Rn.10599	NM_013005	Pik3r1	Phosphoinositide-3-kinase, regulatory subunit 1 (alpha)
F02	Rn.22497	NM_022185	Pik3r2	Phosphoinositide-3-kinase, regulatory subunit 2 (beta)
F03	Rn.48821	NM_012624	Pklr	Pyruvate kinase, liver and RBC
F04	Rn.23443	NM_013124	Pparg	Peroxisome proliferator-activated receptor gamma
F05	Rn.2024	NM_031527	Ppp1ca	Protein phosphatase 1, catalytic subunit, alpha isoform
F06	Rn.9747	NM_012628	Prkcg	Protein kinase C, gamma
F07	Rn.1109	NM_022507	Prkcz	Protein kinase C, zeta
F08	Rn.9759	NM_012629	Prl	Prolactin
F09	Rn.11317	NM_012637	Ptpn1	Protein tyrosine phosphatase, non-receptor type 1
F10	Rn.33262	NM_012639	Raf1	V-raf-leukemia viral oncogene 1
F11	Rn.16746	NM_144741	Retn	Resistin
F12	Rn.34915	NM_031107	Rps6ka1	Ribosomal protein S6 kinase polypeptide 1
G01	Rn.71224	NM_001108481	Rras	Harvey rat sarcoma virus oncogene, subgroup R
G02	Rn.3271	NM_001013434	Rras2	Related RAS viral (r-ras) oncogene homolog 2
G03	Rn.29367	NM_012620	Serpine1	Serpin peptidase inhibitor, clade E (nexin, plasminogen activator inhibitor type 1), member 1
G04	Rn.138818	NM_053517	Shc1	SHC (Src homology 2 domain containing) transforming protein 1
G05	Rn.145068	XM_231115	Slc27a4	Solute carrier family 27 (fatty acid transporter), member 4
G06	Rn.3205	NM_138827	Slc2a1	Solute carrier family 2 (facilitated glucose transporter), member 1
G07	Rn.1314	NM_012751	Slc2a4	Solute carrier family 2 (facilitated glucose transporter), member 4
G08	Rn.91844	NM_001100716	Sos1	Son of sevenless homolog 1 (Drosophila)
G09	Rn.221929	XM_213329	Srebf1	Sterol regulatory element binding transcription factor 1
G10	Rn.10429	NM_030988	Tg	Thyroglobulin
G11	Rn.10281	NM_012682	Ucp1	Uncoupling protein 1 (mitochondrial, proton carrier)
G12	Rn.1923	NM_031836	Vegfa	Vascular endothelial growth factor A
H01	Rn.94978	NM_031144	Actb	Actin, beta
H02	Rn.1868	NM_012512	B2m	Beta-2 microglobulin
H03	Rn.47	NM_012583	Hprt1	Hypoxanthine phosphoribosyltransferase 1
H04	Rn.107896	NM_017025	Ldha	Lactate dehydrogenase A
H05	Rn.973	NM_001007604	Rplp1	Ribosomal protein, large, P1
H06	N/A	U26919	RGDC	Rat 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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² 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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

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