

RT² Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

Rat Obesity

Cat. no. 330231 PARN-017ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT ² Profiler PCR Array, Format A	Applied Biosystems® models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad® models iCycler®, iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf® Mastercycler® ep realplex models 2, 2s, 4, 4s; Stratagene® models Mx3005P®, Mx3000P®; Takara TP-800
RT ² Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT ² Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon®, DNA Engine Opticon 2; Stratagene Mx4000®
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 F	Roche® LightCycler® 480 (96-well block)
RT ² Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT ² Profiler PCR Array, Format H	Fluidigm® BioMark™



Sample & Assay Technologies

Description

The Rat Obesity RT² Profiler PCR Array profiles the expression of 84 genes related to obesity. The control of a relative stable body weight depends on a complex interaction among the hormone axes in the peripheral nervous system and neurotransmitter signals in the central nervous system that play a crucial role in maintaining a balanced energy metabolism. This PCR Array includes obesity-related genes that are directly involved in the regulation of energy intake and expenditure. The genes encode for orexigenic peptides, hormones, and receptors; anorectic peptides, hormones, receptors; and central and peripheral signaling molecules involved in energy expenditure. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to Obesity with this array.

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

Shipping and storage

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

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 (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT² Profiler PCR Array Handbook* for layout.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Adcyap1	Adcyap1r1	Adipoq	Adipor1	Adipor2	Adra2b	Adrb1	Agrp	Apoa4	Atrn	Bdnf	Brs3
B	C3	Calca	Calcr	Cartpt	Cck	Cckar	Clps	Cnr1	Cntf	Cntfr	Crh	Crhr1
C	Drd1a	Drd2	Gal	Galr1	Gcg	Gcgr	Gh1	Ghr	Ghrl	Ghsr	Glp1r	Grp
D	Grpr	Hcrt	Hcrt1	Hrh1	Htr2c	Iapp	Il1a	Il1b	Il1r1	Il6	Il6r	Ins1
E	Ins2	Insr	Lep	Lep1	Mc3r	Mchr1	Nmb	Nmbr	Nmu	Nmur1	Npy	Npy1r
F	Nr3c1	Ntrk1	Nts	Ntsr1	Oprk1	Oprm1	Pomc	Ppara	Pparg	Ppargc1a	Prlhr	Ptpn1
G	Pyy	Ramp3	Sigmar1	Sort1	Sst	Sstr1	Thrb	Tnf	Trh	Trhr	Ucn	Ucp1
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	RTC	RTC	RTC	PPC	PPC	PPC

Gene table: RT² Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Rn.202559	NM_016989	Adcyap1	Adenylate cyclase activating polypeptide 1
A02	Rn.88408	NM_133511	Adcyap1r1	Adenylate cyclase activating polypeptide 1 receptor 1
A03	Rn.24299	NM_144744	Adipoq	Adiponectin, C1Q and collagen domain containing
A04	Rn.104556	NM_207587	Adipor1	Adiponectin receptor 1
A05	Rn.101984	NM_001037979	Adipor2	Adiponectin receptor 2
A06	Rn.10296	NM_138505	Adra2b	Adrenergic, alpha-2B-, receptor
A07	Rn.87064	NM_012701	Adrb1	Adrenergic, beta-1-, receptor
A08	Rn.137597	NM_033650	Agrp	Agouti related protein homolog (mouse)
A09	Rn.15739	NM_012737	Apoa4	Apolipoprotein A-IV
A10	Rn.53846	NM_031351	Atrn	Attractin
A11	Rn.11266	NM_012513	Bdnf	Brain-derived neurotrophic factor
A12	Rn.86415	NM_152845	Brs3	Bombesin-like receptor 3
B01	Rn.11378	NM_016994	C3	Complement component 3
B02	Rn.90085	NM_017338	Calca	Calcitonin-related polypeptide alpha
B03	Rn.10062	NM_053816	Calcr	Calcitonin receptor
B04	Rn.89164	NM_017110	Cartpt	CART prepropeptide
B05	Rn.9781	NM_012829	Cck	Cholecystokinin
B06	Rn.10184	NM_012688	Cckar	Cholecystokinin A receptor
B07	Rn.6714	NM_013139	Clps	Colipase, pancreatic
B08	Rn.89774	NM_012784	Cnr1	Cannabinoid receptor 1 (brain)
B09	Rn.6067	NM_013166	Cntf	Ciliary neurotrophic factor
B10	Rn.55036	NM_001003929	Cntfr	Ciliary neurotrophic factor receptor
B11	Rn.10349	NM_031019	Crh	Corticotropin releasing hormone
B12	Rn.10499	NM_030999	Crhr1	Corticotropin releasing hormone receptor 1
C01	Rn.24039	NM_012546	Drd1a	Dopamine receptor D1A
C02	Rn.87299	NM_012547	Drd2	Dopamine receptor D2
C03	Rn.8929	NM_033237	Gal	Galanin prepropeptide
C04	Rn.10213	NM_012958	Galr1	Galanin receptor 1
C05	Rn.54383	NM_012707	Gcg	Glucagon
C06	Rn.11225	NM_172092	Gcgr	Glucagon receptor
C07	Rn.146351	NM_001034848	Gh1	Growth hormone 1
C08	Rn.2178	NM_017094	Ghr	Growth hormone receptor
C09	Rn.42103	NM_021669	Ghrl	Ghrelin/obestatin prepropeptide
C10	Rn.74241	NM_032075	Ghsr	Growth hormone secretagogue receptor
C11	Rn.11408	NM_012728	Glp1r	Glucagon-like peptide 1 receptor
C12	Rn.10930	NM_133570	Grp	Gastrin releasing peptide
D01	Rn.10316	NM_012706	Grpr	Gastrin releasing peptide receptor
D02	Rn.7628	NM_013179	Hcrt	Hypocretin
D03	Rn.88262	NM_013064	Hcrt1	Hypocretin (orexin) receptor 1
D04	Rn.81032	NM_017018	Hrh1	Histamine receptor H 1
D05	Rn.9935	NM_012765	Htr2c	5-hydroxytryptamine (serotonin) receptor 2C
D06	Rn.11394	NM_012586	Iapp	Islet amyloid polypeptide
D07	Rn.12300	NM_017019	Il1a	Interleukin 1 alpha
D08	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D09	Rn.9758	NM_013123	Il1r1	Interleukin 1 receptor, type 1

Position	UniGene	GenBank	Symbol	Description
D10	Rn.9873	NM_012589	Il6	Interleukin 6
D11	Rn.1716	NM_017020	Il6r	Interleukin 6 receptor
D12	Rn.962	NM_019129	Ins1	Insulin 1
E01	Rn.989	NM_019130	Ins2	Insulin 2
E02	Rn.9876	NM_017071	Insr	Insulin receptor
E03	Rn.44444	NM_013076	Lep	Leptin
E04	Rn.9891	NM_012596	Lepr	Leptin receptor
E05	Rn.215838	NM_001025270	Mc3r	Melanocortin 3 receptor
E06	Rn.10822	NM_031758	Mchr1	Melanin-concentrating hormone receptor 1
E07	Rn.130371	NM_001109149	Nmb	Neuromedin B
E08	Rn.89709	NM_012799	Nmbr	Neuromedin B receptor
E09	Rn.47720	NM_022239	Nmu	Neuromedin U
E10	Rn.54457	NM_023100	Nmur1	Neuromedin U receptor 1
E11	Rn.9714	NM_012614	Npy	Neuropeptide Y
E12	Rn.11642	NM_001113357	Npy1r	Neuropeptide Y receptor Y1
F01	Rn.90070	NM_012576	Nr3c1	Nuclear receptor subfamily 3, group C, member 1
F02	Rn.39098	NM_021589	Ntrk1	Neurotrophic tyrosine kinase, receptor, type 1
F03	Rn.60814	NM_001102381	Nts	Neurotensin
F04	Rn.200149	NM_001108967	Ntsr1	Neurotensin receptor 1
F05	Rn.89571	NM_017167	Oprk1	Opioid receptor, kappa 1
F06	Rn.10118	NM_013071	Oprm1	Opioid receptor, mu 1
F07	Rn.108195	NM_139326	Pomc	Proopiomelanocortin
F08	Rn.9753	NM_013196	Ppara	Peroxisome proliferator activated receptor alpha
F09	Rn.23443	NM_013124	Pparg	Peroxisome proliferator-activated receptor gamma
F10	Rn.19172	NM_031347	Ppargc1a	Peroxisome proliferator-activated receptor gamma, coactivator 1 alpha
F11	Rn.138127	NM_139193	Prlhr	Prolactin releasing hormone receptor
F12	Rn.11317	NM_012637	Ptpn1	Protein tyrosine phosphatase, non-receptor type 1
G01	Rn.13173	NM_001034080	Pyy	Peptide YY (mapped)
G02	Rn.48672	NM_020100	Ramp3	Receptor (G protein-coupled) activity modifying protein 3
G03	Rn.1129	NM_030996	Sigmar1	Sigma non-opioid intracellular receptor 1
G04	Rn.11286	NM_031767	Sort1	Sortilin 1
G05	Rn.34418	NM_012659	Sst	Somatostatin
G06	Rn.42915	NM_012719	Sstr1	Somatostatin receptor 1
G07	Rn.88692	NM_012672	Thrb	Thyroid hormone receptor beta
G08	Rn.2275	NM_012675	Tnf	Tumor necrosis factor (TNF superfamily, member 2)
G09	Rn.22	NM_013046	Trh	Thyrotropin releasing hormone
G10	Rn.9962	NM_013047	Trhr	Thyrotropin releasing hormone receptor
G11	Rn.10190	NM_019150	Ucn	Urocortin
G12	Rn.10281	NM_012682	Ucp1	Uncoupling protein 1 (mitochondrial, proton carrier)
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.
RT ² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT ² SYBR Green qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with real-time cyclers that do not require a reference dye, including: Bio-Rad models CFX96, CFX384, DNA Engine Opticon 2; Bio-Rad/MJ Research Chromo4; Roche LightCycler 480 (96-well and 384-well); all other cyclers	330500
RT ² SYBR Green ROX [™] qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Applied Biosystems models 5700, 7000, 7300, 7500 [Standard and FAST], 7700, 7900HT 96-well block [Standard and FAST] and 384-well block, StepOnePlus; Eppendorf Mastercycler ep realplex models 2, 2S, 4, 4S; Stratagene models Mx3000P, Mx3005P, Mx4000; Takara TP-800	330520
RT ² SYBR Green Fluor qPCR Mastermix (2)*	For 2 x 96 assays in 96-well plates; suitable for use with the following real-time cyclers: Bio-Rad models iCycler, iQ5, MyiQ, MyiQ2	330510

* 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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