

# RT<sup>2</sup> Profiler PCR Array (96-Well Format and 384-Well [4 x 96] Format)

## Human Obesity

Cat. no. 330231 PAHS-017ZA

For pathway expression analysis

Format	For use with the following real-time cyclers
RT <sup>2</sup> Profiler PCR Array, Format A	Applied Biosystems <sup>®</sup> models 5700, 7000, 7300, 7500, 7700, 7900HT, ViiA™ 7 (96-well block); Bio-Rad <sup>®</sup> models iCycler <sup>®</sup> , iQ™ 5, MyiQ™, MyiQ2; Bio-Rad/MJ Research Chromo4™; Eppendorf <sup>®</sup> Mastercycler <sup>®</sup> ep realplex models 2, 2s, 4, 4s; Stratagene <sup>®</sup> models Mx3005P <sup>®</sup> , Mx3000P <sup>®</sup> ; Takara TP-800
RT <sup>2</sup> Profiler PCR Array, Format C	Applied Biosystems models 7500 (Fast block), 7900HT (Fast block), StepOnePlus™, ViiA 7 (Fast block)
RT <sup>2</sup> Profiler PCR Array, Format D	Bio-Rad CFX96™; Bio-Rad/MJ Research models DNA Engine Opticon <sup>®</sup> , DNA Engine Opticon 2; Stratagene Mx4000 <sup>®</sup>
RT <sup>2</sup> Profiler PCR Array, Format E	Applied Biosystems models 7900HT (384-well block), ViiA 7 (384-well block); Bio-Rad CFX384™
RT <sup>2</sup> Profiler PCR Array, Format F	Roche <sup>®</sup> LightCycler <sup>®</sup> 480 (96-well block)
RT <sup>2</sup> Profiler PCR Array, Format G	Roche LightCycler 480 (384-well block)
RT <sup>2</sup> Profiler PCR Array, Format H	Fluidigm <sup>®</sup> BioMark™



Sample & Assay Technologies

## Description

The Human Obesity RT<sup>2</sup> 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 *RT<sup>2</sup> Profiler PCR Array Handbook*.

## Shipping and storage

RT<sup>2</sup> 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. RT<sup>2</sup> Profiler PCR Arrays in format H are shipped on dry ice or blue ice packs.

For long term storage, keep plates at  $-20^{\circ}\text{C}$ .

**Note:** Ensure that you have the correct RT<sup>2</sup> Profiler PCR Array format for your real-time cycler (see table above).

**Note:** Open the package and store the products appropriately immediately on receipt.

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## Array layout (96-well)

For 384-well 4 x 96 PCR arrays, genes are present in a staggered format. Refer to the *RT<sup>2</sup> 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	CNTFR	CPD	CPE	CRHR1
C	DRD1	DRD2	GAL	GALR1	GCG	GCGR	GH1	GH2	GHR	GHRL	GHSR	GLP1R
D	GRP	GRPR	HCRT	HCRTR1	HRH1	HTR2C	IAPP	IL1A	IL1B	IL1R1	IL6	IL6R
E	INS	INSR	LEP	LEPR	MC3R	MCHR1	NMB	NMBR	NMU	NMUR1	NPY	NPY1R
F	NR3C1	NTRK2	NTS	NTSR1	OPRK1	OPRM1	POMC	PPARA	PPARG	PPARGC1A	PRLHR	PTPN1
G	PYY	RAMP3	SIGMAR1	SORT1	SST	SSTR2	THRB	TNF	TRH	UCN	UCP1	ZFP91
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	RTC	RTC	RTC	PPC	PPC	PPC

## Gene table: RT<sup>2</sup> Profiler PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Hs.531719	NM_001117	ADCYAP1	Adenylate cyclase activating polypeptide 1 (pituitary)
A02	Hs.377783	NM_001118	ADCYAP1R1	Adenylate cyclase activating polypeptide 1 (pituitary) receptor type I
A03	Hs.80485	NM_004797	ADIPOQ	Adiponectin, C1Q and collagen domain containing
A04	Hs.5298	NM_015999	ADIPOR1	Adiponectin receptor 1
A05	Hs.371642	NM_024551	ADIPOR2	Adiponectin receptor 2
A06	Hs.247686	NM_000682	ADRA2B	Adrenergic, alpha-2B-, receptor
A07	Hs.99913	NM_000684	ADRB1	Adrenergic, beta-1-, receptor
A08	Hs.104633	NM_001138	AGRP	Agouti related protein homolog (mouse)
A09	Hs.591940	NM_000482	APOA4	Apolipoprotein A-IV
A10	Hs.276252	NM_139321	ATRN	Attractin
A11	Hs.502182	NM_001709	BDNF	Brain-derived neurotrophic factor
A12	Hs.121484	NM_001727	BRS3	Bombesin-like receptor 3
B01	Hs.529053	NM_000064	C3	Complement component 3
B02	Hs.37058	NM_001741	CALCA	Calcitonin-related polypeptide alpha
B03	Hs.489127	NM_001742	CALCR	CALCITONIN RECEPTOR
B04	Hs.1707	NM_004291	CARTPT	CART prepropeptide
B05	Hs.458426	NM_000729	CCK	Cholecystokinin
B06	Hs.129	NM_000730	CCKAR	Cholecystokinin A receptor
B07	Hs.1340	NM_001832	CLPS	Colipase, pancreatic
B08	Hs.75110	NM_016083	CNR1	Cannabinoid receptor 1 (brain)
B09	Hs.129966	NM_001842	CNTFR	Ciliary neurotrophic factor receptor
B10	Hs.446079	NM_001304	CPD	Carboxypeptidase D
B11	Hs.707992	NM_001873	CPE	Carboxypeptidase E
B12	Hs.417628	NM_004382	CRHR1	Corticotropin releasing hormone receptor 1
C01	Hs.2624	NM_000794	DRD1	Dopamine receptor D1
C02	Hs.73893	NM_000795	DRD2	Dopamine receptor D2
C03	Hs.278959	NM_015973	GAL	Galanin prepropeptide
C04	Hs.272191	NM_001480	GALR1	Galanin receptor 1
C05	Hs.516494	NM_002054	GCG	Glucagon
C06	Hs.208	NM_000160	GCGR	Glucagon receptor
C07	Hs.567275	NM_000515	GH1	Growth hormone 1
C08	Hs.406754	NM_022557	GH2	Growth hormone 2
C09	Hs.125180	NM_000163	GHR	Growth hormone receptor
C10	Hs.590080	NM_016362	GHRL	Ghrelin/obestatin prepropeptide
C11	Hs.248115	NM_004122	GHSR	Growth hormone secretagogue receptor
C12	Hs.389103	NM_002062	GLP1R	Glucagon-like peptide 1 receptor
D01	Hs.153444	NM_002091	GRP	Gastrin-releasing peptide
D02	Hs.567282	NM_005314	GRPR	Gastrin-releasing peptide receptor
D03	Hs.158348	NM_001524	HCRT	Hypocretin (orexin) neuropeptide precursor
D04	Hs.388226	NM_001525	HCRTR1	Hypocretin (orexin) receptor 1
D05	Hs.1570	NM_000861	HRH1	Histamine receptor H1
D06	Hs.149037	NM_000868	HTR2C	5-hydroxytryptamine (serotonin) receptor 2C
D07	Hs.46835	NM_000415	IAPP	Islet amyloid polypeptide
D08	Hs.1722	NM_000575	IL1A	Interleukin 1, alpha
D09	Hs.126256	NM_000576	IL1B	Interleukin 1, beta

Position	UniGene	GenBank	Symbol	Description
D10	Hs.701982	NM_000877	IL1R1	Interleukin 1 receptor, type 1
D11	Hs.654458	NM_000600	IL6	Interleukin 6 (interferon, beta 2)
D12	Hs.709210	NM_000565	IL6R	Interleukin 6 receptor
E01	Hs.654579	NM_000207	INS	Insulin
E02	Hs.465744	NM_000208	INSR	Insulin receptor
E03	Hs.194236	NM_000230	LEP	Leptin
E04	Hs.705413	NM_002303	LEPR	Leptin receptor
E05	Hs.248018	NM_019888	MC3R	Melanocortin 3 receptor
E06	Hs.248122	NM_005297	MCHR1	Melanin-concentrating hormone receptor 1
E07	Hs.386470	NM_021077	NMB	Neuromedin B
E08	Hs.654478	NM_002511	NMBR	Neuromedin B receptor
E09	Hs.418367	NM_006681	NMU	Neuromedin U
E10	Hs.471619	NM_006056	NMUR1	Neuromedin U receptor 1
E11	Hs.1832	NM_000905	NPY	Neuropeptide Y
E12	Hs.519057	NM_000909	NPY1R	Neuropeptide Y receptor Y1
F01	Hs.122926	NM_000176	NR3C1	Nuclear receptor subfamily 3, group C, member 1 (glucocorticoid receptor)
F02	Hs.494312	NM_006180	NTRK2	Neurotrophic tyrosine kinase, receptor, type 2
F03	Hs.80962	NM_006183	NTS	Neurotensin
F04	Hs.590869	NM_002531	NTSR1	Neurotensin receptor 1 (high affinity)
F05	Hs.106795	NM_000912	OPRK1	Opioid receptor, kappa 1
F06	Hs.2353	NM_000914	OPRM1	Opioid receptor, mu 1
F07	Hs.1897	NM_000939	POMC	Proopiomelanocortin
F08	Hs.103110	NM_005036	PPARA	Peroxisome proliferator-activated receptor alpha
F09	Hs.162646	NM_015869	PPARG	Peroxisome proliferator-activated receptor gamma
F10	Hs.527078	NM_013261	PPARGC1A	Peroxisome proliferator-activated receptor gamma, coactivator 1 alpha
F11	Hs.248119	NM_004248	PRLHR	Prolactin releasing hormone receptor
F12	Hs.417549	NM_002827	PTPN1	Protein tyrosine phosphatase, non-receptor type 1
G01	Hs.169249	NM_004160	PYY	Peptide YY
G02	Hs.25691	NM_005856	RAMP3	Receptor (G protein-coupled) activity modifying protein 3
G03	Hs.522087	NM_005866	SIGMAR1	Sigma non-opioid intracellular receptor 1
G04	Hs.485195	NM_002959	SORT1	Sortilin 1
G05	Hs.12409	NM_001048	SST	Somatostatin
G06	Hs.514451	NM_001050	SSTR2	Somatostatin receptor 2
G07	Hs.187861	NM_000461	THRB	Thyroid hormone receptor, beta (erythroblastic leukemia viral (v-erb-a) oncogene homolog 2, avian)
G08	Hs.241570	NM_000594	TNF	Tumor necrosis factor
G09	Hs.182231	NM_007117	TRH	Thyrotropin-releasing hormone
G10	Hs.534363	NM_003353	UCN	Urocortin
G11	Hs.249211	NM_021833	UCP1	Uncoupling protein 1 (mitochondrial, proton carrier)
G12	Hs.524920	NM_053023	ZFP91	Zinc finger protein 91 homolog (mouse)
H01	Hs.520640	NM_001101	ACTB	Actin, beta
H02	Hs.534255	NM_004048	B2M	Beta-2-microglobulin
H03	Hs.592355	NM_002046	GAPDH	Glyceraldehyde-3-phosphate dehydrogenase
H04	Hs.412707	NM_000194	HPRT1	Hypoxanthine phosphoribosyltransferase 1
H05	Hs.546285	NM_001002	RPLP0	Ribosomal protein, large, P0
H06	N/A	SA_00105	HGDC	Human 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, RT<sup>2</sup> Profiler PCR Arrays should be used together with the RT<sup>2</sup> First Strand Kit for cDNA synthesis and RT<sup>2</sup> SYBR<sup>®</sup> Green qPCR Mastermixes for PCR.

Product	Contents	Cat. no.
RT <sup>2</sup> First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT <sup>2</sup> 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 <sup>2</sup> 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 <sup>2</sup> 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.

RT<sup>2</sup> 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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