

# RT<sup>2</sup> Profiler PCR Array (Rotor-Gene<sup>®</sup> Format)

## Rat Tumor Metastasis

Cat. no. 330231 PARN-028ZR

For pathway expression analysis

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

### Description

The Rat Tumor Metastasis RT<sup>2</sup> Profiler PCR Array is designed to represent 84 genes known to be involved in metastasis. Genes selected for this array encode several classes of protein factors including cell adhesion, ECM components, cell cycle, cell growth and proliferation, apoptosis, transcription factors and regulators and other genes related to tumor metastasis. This array can help you investigate the molecular mechanism of metastasis or understand how a particular tumor metastasized. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to metastasis.

For further details, consult the *RT<sup>2</sup> Profiler PCR Array Handbook*.

### Shipping and storage

RT<sup>2</sup> 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 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.



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

Position	UniGene	GenBank	Symbol	Description
A01	Rn.88057	NM_012499	Apc	Adenomatous polyposis coli
A02	Rn.2839	NM_001009605	Brms1	Breast cancer metastasis-suppressor 1
A03	Rn.26815	NM_001007612	Ccl7	Chemokine (C-C motif) ligand 7
A04	Rn.1120	NM_012924	Cd44	Cd44 molecule
A05	Rn.3022	NM_031797	Cd82	Cd82 molecule
A06	Rn.1303	NM_031334	Cdh1	Cadherin 1
A07	Rn.8900	NM_053392	Cdh11	Cadherin 11
A08	Rn.10390	NM_012927	Cdh6	Cadherin 6
A09	Rn.214220	NM_053393	Cdh8	Cadherin 8
A10	Rn.48717	NM_031550	Cdkn2a	Cyclin-dependent kinase inhibitor 2A
A11	Rn.63247	XM_232354	Chd4	Chromodomain helicase DNA binding protein 4
A12	Rn.2237	XM_225043	Col4a2	Collagen, type IV, alpha 2
B01	Rn.83632	NM_023981	Csf1	Colony stimulating factor 1 (macrophage)
B02	Rn.24282	NM_001106523	Cst7	Cystatin F (leukocystatin)
B03	Rn.3946	NM_019201	Ctbp1	C-terminal binding protein 1
B04	Rn.5598	NM_031560	Ctsk	Cathepsin K
B05	Rn.1294	NM_013156	Ctsl	Cathepsin L1
B06	Rn.54439	NM_022177	Cxcl12	Chemokine (C-X-C motif) ligand 12 (stromal cell-derived factor 1)
B07	Rn.90347	NM_017183	Cxcr2	Chemokine (C-X-C motif) receptor 2
B08	Rn.44431	NM_022205	Cxcr4	Chemokine (C-X-C motif) receptor 4
B09	Rn.90573	NM_001106767	Elane	Elastase, neutrophil expressed
B10	Rn.27233	NM_001127319	Ephb2	Eph receptor B2
B11	Rn.195602	NM_001108299	Etv4	Ets variant 4
B12	Rn.52785	NM_001025632	Ewsr1	Ewing sarcoma breakpoint region 1
C01	Rn.8633	NM_031819	Fat1	FAT tumor suppressor homolog 1 (Drosophila)
C02	Rn.24104	NM_001109904	Fgfr4	Fibroblast growth factor receptor 4
C03	Rn.81043	NM_053652	Flt4	Fms-related tyrosine kinase 4
C04	Rn.1604	NM_019143	Fn1	Fibronectin 1
C05	Rn.24997	NM_021909	Fxyd5	FXFD domain-containing ion transport regulator 5
C06	Rn.59459	NM_012767	Gnrh1	Gonadotropin-releasing hormone 1 (luteinizing-releasing hormone)
C07	Rn.10468	NM_017017	Hgf	Hepatocyte growth factor
C08	Rn.1427	NM_031330	Hnrnpab	Heterogeneous nuclear ribonucleoprotein A/B
C09	Rn.6392	NM_022605	Hpse	Heparanase
C10	Rn.102180	NM_001098241	Hras	Harvey rat sarcoma virus oncogene
C11	Rn.138436	NM_001106263	Htatip2	HIV-1 tat interactive protein 2, homolog (human)
C12	Rn.6282	NM_178866	Igf1	Insulin-like growth factor 1
D01	Rn.11118	NM_019165	Il18	Interleukin 18
D02	Rn.9869	NM_031512	Il1b	Interleukin 1 beta
D03	Rn.54492	NM_030842	Itga7	Integrin, alpha 7
D04	Rn.162202	NM_153720	Itgb3	Integrin, beta 3
D05	Rn.66008	NM_181692	Kiss1	KISS-1 metastasis-suppressor
D06	Rn.48681	NM_023992	Kiss1r	KISS1 receptor
D07	Rn.24554	NM_031515	Kras	V-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog
D08	Rn.101864	XM_001067744	LOC689601	Similar to density-regulated protein
D09	Rn.2694	NM_023983	Mcam	Melanoma cell adhesion molecule
D10	Rn.91829	NM_001108099	Mdm2	Mdm2 p53 binding protein homolog (mouse)
D11	Rn.10617	NM_031517	Met	Met proto-oncogene
D12	Rn.9946	NM_133514	Mmp10	Matrix metalloproteinase 10
E01	Rn.11123	NM_012980	Mmp11	Matrix metalloproteinase 11
E02	Rn.10997	NM_133530	Mmp13	Matrix metalloproteinase 13
E03	Rn.6422	NM_031054	Mmp2	Matrix metalloproteinase 2
E04	Rn.32086	NM_133523	Mmp3	Matrix metalloproteinase 3
E05	Rn.10282	NM_012864	Mmp7	Matrix metalloproteinase 7
E06	Rn.10209	NM_031055	Mmp9	Matrix metalloproteinase 9
E07	Rn.5840	NM_022588	Mta1	Metastasis associated 1
E08	Rn.38488	NM_001130563	Mtss1	Metastasis suppressor 1
E09	Rn.12072	NM_012603	Myc	Myelocytomatosis oncogene

Position	UniGene	GenBank	Symbol	Description
E10	Rn.41400	XM_233490	Mycl1	V-myc myelocytomatosis viral oncogene homolog 1, lung carcinoma derived (avian)
E11	Rn.46695	NM_013193	Nf2	Neurofibromin 2 (merlin)
E12	Rn.6236	NM_138548	Nme1	Non-metastatic cells 1, protein (NM23A) expressed in
F01	Rn.927	NM_031833	Nme2	Non-metastatic cells 2, protein (NM23B) expressed in
F02	Rn.145946	NM_001109478	Nme4	Non-metastatic cells 4, protein expressed in
F03	Rn.62694	NM_017352	Nr4a3	Nuclear receptor subfamily 4, group A, member 3
F04	Rn.82711	NM_017350	Plaur	Plasminogen activator, urokinase receptor
F05	Rn.38987	NM_001109023	Pnn	Pinin, desmosome associated protein
F06	Rn.22158	NM_031606	Pten	Phosphatase and tensin homolog
F07	Rn.55115	NM_017045	Rb1	Retinoblastoma 1
F08	Rn.210157	XM_219749	Rorb	RAR-related orphan receptor B
F09	Rn.2029	NM_012649	Sdc4	Syndecan 4
F10	Rn.2755	NM_019191	Smad2	SMAD family member 2
F11	Rn.9774	NM_019275	Smad4	SMAD family member 4
F12	Rn.112600	NM_031977	Src	V-src sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (avian)
G01	Rn.9929	NM_019348	Sstr2	Somatostatin receptor 2
G02	Rn.87407	NM_012758	Syk	Spleen tyrosine kinase
G03	Rn.220442	NM_001130574	Tcf20	Transcription factor 20
G04	Rn.40136	NM_021578	Tgfb1	Transforming growth factor, beta 1
G05	Rn.10161	NM_021989	Timp2	TIMP metalloproteinase inhibitor 2
G06	Rn.119634	NM_012886	Timp3	TIMP metalloproteinase inhibitor 3
G07	Rn.155651	NM_001109393	Timp4	Tissue inhibitor of metalloproteinase 4
G08	Rn.83627	NM_145681	Tnfsf10	Tumor necrosis factor (ligand) superfamily, member 10
G09	Rn.54443	NM_030989	Tp53	Tumor protein p53
G10	Rn.211311	NM_001037733	Trpm1	Transient receptor potential cation channel, subfamily M, member 1
G11	Rn.87913	NM_012888	Tshr	Thyroid stimulating hormone receptor
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, 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 ROX <sup>™</sup> 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.

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.

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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

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