

RT² lncRNA PCR Array (Rotor-Gene® Format)

Mouse Cancer PathwayFinder

Cat. no. 330721 LAMM-002ZR

For lncRNA expression analysis by pathway and disease
using laboratory-verified SYBR® Green qPCR assays

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

Description

The Mouse Cancer PathwayFinder RT² lncRNA PCR Array profiles the expression of 84 long noncoding RNAs (lncRNAs) differentially expressed in tumors versus normal tissue. This array provides cancer researchers with a convenient and accurate way to quickly analyze the lncRNAs most relevant to tumorigenesis discovered to date. These lncRNAs have been carefully selected based on results published in peer-reviewed journals that suggest a correlation with the diagnosis, staging, progression, or prognosis of various cancers or tumors. In some cases, lncRNAs were also chosen based either on their association with cancer-related miRNA predicted with bioinformatics or on their proximity in the genome to key oncogenes and tumor suppressor genes. The profiling results from this array may yield insights into the molecular mechanisms behind the pathogenesis of many cancers or tumor types. A set of controls present on this array enables data analysis using the delta-delta CT method of relative quantification, assessment of reverse transcription performance, and assessment of PCR performance. Using SYBR Green real-time PCR, the expression of a focused panel of lncRNAs related to cancer research can be easily and reliably analyzed with this RT² lncRNA PCR Array.

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

Shipping and storage

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

Position	UniGene	GenBank	Symbol	Description
A01	N/A	ENSMUST00000183365	1110028F18 Rik	RIKEN cDNA 1110028F18 gene
A02	N/A	ENSMUST00000180964	1700015O11 1Rik	RIKEN cDNA 1700015O11 gene [Source:MGI Symbol;Acc:MGI:1919105]
A03	N/A	ENSMUST00000134252	1700016P03 Rik	RIKEN cDNA 1700016P03 gene [Source:MGI Symbol;Acc:MGI:1922792]
A04	Mm.379181	ENSMUST00000147425	1700020I14R ik	RIKEN cDNA 1700020I14 gene
A05	Mm.460470	ENSMUST00000181358	1700034P13 Rik	RIKEN cDNA 1700034P13 gene
A06	N/A	ENSMUST00000131787	2410006H16 Rik	RIKEN cDNA 2410006H16 gene
A07	N/A	ENSMUST00000140589	4930593C16 Rik	RIKEN cDNA 4930593C16 gene
A08	Mm.437539	ENSMUST00000139864	4933408N05 Rik	RIKEN cDNA 4933408N05 gene
A09	N/A	NR_103550	5430425K12 Rik	RIKEN cDNA 5430425K12 gene
A10	N/A	NR_040589	6330410L21 Rik	RIKEN cDNA 6330410L21 gene
A11	Mm.483472	ENSMUST00000181121	9530026P05 Rik	RIKEN cDNA 9530026P05 gene
A12	N/A	ENSMUST00000181107	9530059O14 4Rik	RIKEN cDNA 9530059O14 gene
B01	N/A	ENSMUST00000180481	A330076H08 Rik	RIKEN cDNA A330076H08 gene
B02	N/A	ENSMUST00000151122	A530072M11 1Rik	RIKEN cDNA gene A530072M11
B03	Mm.194050	ENSMUST00000180610	A930011O12 2Rik	RIKEN cDNA A930011O12 gene
B04	Mm.347584	ENSMUST00000070085	AI504432	Expressed sequence AI504432
B05	Mm.26553	ENSMUST00000079529	Airn	Antisense Igf2r RNA
B06	Mm.436987	ENSMUST00000165610	AU040972	Expressed sequence AU040972
B07	Mm.245636	ENSMUST00000052354	C130071C03 3Rik	RIKEN cDNA C130071C03 gene
B08	Mm.127263	ENSMUST00000096426	C230004F18 Rik	RIKEN cDNA C230004F18 gene

Position	UniGene	GenBank	Symbol	Description
B09	Mm.86664	ENSMUST00000034183	Crnde	Colorectal neoplasia differentially expressed (non-protein coding)
B10	N/A	ENSMUST00000149224	D430040D24Rik	RIKEN cDNA D430040D24 gene [Source:MGI Symbol;Acc:MGI:2442526]
B11	N/A	ENSMUST00000144260	D630008O14Rik	RIKEN cDNA D630008O14 gene [Source:MGI Symbol;Acc:MGI:3698880]
B12	Mm.473427	ENSMUST00000180377	Dleu2	Deleted in lymphocytic leukemia, 2
C01	N/A	ENSMUST00000139662	Dnm3os	Dynamin 3, opposite strand
C02	N/A	ENSMUST00000136990	Emx2os	Emx2 opposite strand/antisense transcript (non-protein coding)
C03	N/A	ENSMUST00000140105	F730043M19Rik	RIKEN cDNA F730043M19 gene
C04	N/A	ENSMUST00000124842	Firre	Functional intergenic repeating RNA element
C05	N/A	ENSMUST00000123841	Ftx	Ftx transcript, Xist regulator (non-protein coding)
C06	Mm.486180	ENSMUST00000065709	Gas5	Growth arrest specific 5
C07	Mm.414290	ENSMUST00000097631	Gm10548	Ribosomal protein L29 pseudogene
C08	N/A	ENSMUST00000153899	Gm11655	Predicted gene 11655 [Source:MGI Symbol;Acc:MGI:3650998]
C09	N/A	ENSMUST00000137462	Gm11656	Predicted gene 11656 [Source:MGI Symbol;Acc:MGI:3651000]
C10	N/A	ENSMUST00000137175	Gm11657	Predicted gene 11657 [Source:MGI Symbol;Acc:MGI:3649241]
C11	N/A	ENSMUST00000154452	Gm12352	Predicted gene 12352 [Source:MGI Symbol;Acc:MGI:3705172]
C12	N/A	ENSMUST00000127174	Gm12606	Predicted gene 12606
D01	N/A	ENSMUST00000144637	Gm12682	Predicted gene 12682 [Source:MGI Symbol;Acc:MGI:3650643]
D02	N/A	ENSMUST00000145411	Gm12703	Predicted gene 12703 [Source:MGI Symbol;Acc:MGI:3650667]
D03	N/A	ENSMUST00000143429	Gm13116	Predicted gene 13116 [Source:MGI Symbol;Acc:MGI:3649248]
D04	N/A	ENSMUST00000145389	Gm13425	Predicted gene 13425 [Source:MGI Symbol;Acc:MGI:3649915]
D05	N/A	ENSMUST00000153726	Gm13972	Predicted gene 13972 [Source:MGI Symbol;Acc:MGI:3649226]
D06	N/A	ENSMUST00000152600	Gm15344	Predicted gene 15344 [Source:MGI Symbol;Acc:MGI:3708098]
D07	N/A	ENSMUST00000139612	Gm15706	Predicted gene 15706
D08	N/A	ENSMUST00000146314	Gm15832	Predicted gene 15832 [Source:MGI Symbol;Acc:MGI:3834078]
D09	N/A	ENSMUST00000160938	Gm16006	Predicted gene 16006 [Source:MGI Symbol;Acc:MGI:3801853]
D10	N/A	ENSMUST00000160544	Gm16117	Predicted gene 16117 [Source:MGI Symbol;Acc:MGI:3801925]
D11	N/A	ENSMUST00000127711	Gm16224	Predicted gene 16224 [Source:MGI Symbol;Acc:MGI:3801902]
D12	N/A	ENSMUST00000160149	Gm16542	Predicted gene 16542 [Source:MGI Symbol;Acc:MGI:4414962]
E01	N/A	ENSMUST00000168470	Gm17233	Predicted gene 17233 [Source:MGI Symbol;Acc:MGI:4938060]
E02	N/A	ENSMUST00000180839	Gm17276	Predicted gene, 17276 [Source:MGI Symbol;Acc:MGI:4936910]
E03	N/A	ENSMUST00000182109	Gm19557	Predicted gene, 19557
E04	N/A	ENSMUST00000168978	Gm20427	Predicted gene 20427 [Source:MGI Symbol;Acc:MGI:5141892]
E05	N/A	ENSMUST00000177539	Gm20645	Predicted gene 20645 [Source:MGI Symbol;Acc:MGI:5313092]
E06	N/A	ENSMUST00000083394	Gm22053	Predicted gene, 22053 [Source:MGI Symbol;Acc:MGI:5451830]
E07	N/A	ENSMUST00000158900	Gm23833	Predicted gene, 23833 [Source:MGI Symbol;Acc:MGI:5453610]
E08	N/A	ENSMUST00000	Gm24860	Predicted gene, 24860 [Source:MGI Symbol;Acc:MGI:5454637]

Position	UniGene	GenBank	Symbol	Description
		158457		
E09	N/A	ENSMUST00000175448	Gm25694	Predicted gene, 25694 [Source:MGI Symbol;Acc:MGI:5455471]
E10	N/A	ENSMUST00000180680	Gm26577	Predicted gene, 26577 [Source:MGI Symbol;Acc:MGI:5477071]
E11	N/A	ENSMUST00000100778	Gm6288	Predicted gene 6288
E12	N/A	ENSMUST00000180865	Gm9917	Predicted gene 9917
F01	Mm.490776	NR_001592	H19	H19 fetal liver mRNA
F02	N/A	ENSMUST00000151949	Hotair	HOX transcript antisense RNA (non-protein coding)
F03	N/A	ENSMUST00000141300	Hottip	Hoxa distal transcript antisense RNA
F04	Mm.469918	ENSMUST00000134512	Hoxa11os	HOXA11 antisense RNA (non-protein coding)
F05	Mm.491385	NR_015351	lpw	Imprinted gene in the Prader-Willi syndrome region
F06	N/A	ENSMUST00000181020	Jpx	Jpx transcript, Xist activator (non-protein coding)
F07	N/A	NR_001461	Kcnq1ot1	KCNQ1 overlapping transcript 1
F08	N/A	ENSMUST00000172812	Malat1	Metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
F09	Mm.442513	ENSMUST00000124106	Meg3	Maternally expressed 3
F10	Mm.44854	ENSMUST00000181535	Miat	Myocardial infarction associated transcript (non-protein coding)
F11	N/A	ENSMUST00000173672	Neat1	Nuclear paraspeckle assembly transcript 1 (non-protein coding)
F12	N/A	ENSMUST00000143738	Nespas	Neuroendocrine secretory protein antisense
G01	N/A	ENSMUST00000140412	Nron	Non-protein coding RNA, repressor of NFAT
G02	Mm.4608	ENSMUST00000180432	Pvt1	Plasmacytoma variant translocation 1
G03	Mm.293263	ENSMUST00000180876	Rian	RNA imprinted and accumulated in nucleus
G04	N/A	ENSMUST00000157463	Rmrp	RNA component of mitochondrial RNAase P
G05	Mm.429764	ENSMUST00000181213	Rmst	Rhabdomyosarcoma 2 associated transcript (non-coding RNA)
G06	N/A	ENSMUST00000183616	RP23-93M1.3	RP23-93M1.3
G07	N/A	ENSMUST00000082862	Terc	Telomerase RNA component
G08	N/A	ENSMUST00000133221	Trp53cor1	Tumor protein p53 pathway corepressor 1
G09	N/A	ENSMUST00000152916	Tsix	X (inactive)-specific transcript, opposite strand
G10	N/A	ENSMUST00000132077	Tug1	Taurine upregulated gene 1
G11	N/A	ENSMUST00000099647	Wt1os	Wilms tumor 1 homolog, opposite strand
G12	Mm.472939	ENSMUST00000127786	Xist	Inactive X specific transcripts
H01	Mm.391967	NM_007393	Actb	Actin, beta
H02	Mm.163	NM_009735	B2m	Beta-2 microglobulin
H03	Mm.5286	NM_007475	Rplp0	Ribosomal protein, large, P0
H04	N/A	ENSMUST00000083103	Rn7sk	RNA, 7SK, nuclear
H05	N/A	ENSMUST00000083419	Snora73b	Small nucleolar RNA, H/ACA box 73b
H06	N/A	SA_00106	MGDC	Mouse 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

Functional Gene Grouping:

Oncogenes: Crnde, H19, Hotair, Hottip, Kcnq1ot1, Malat1, Pvt1, Terc, Tug1, Xist.

Tumor Suppressor Genes: Dleu2, Gas5, Meg3, Neat1, Terc, Wt1os.

Cancers:

Bladder Cancer: H19, Malat1, Meg3, Terc, Tug1.

Breast Cancer: Gas5, H19, Hotair, Xist.

Cervical Cancer: Meg3.

Colorectal Cancer: Crnde, H19, Hotair, Malat1, Pvt1.

Endometrial Cancer: H19, Hotair.

Esophageal Squamous Cell Carcinoma: Hotair.

Gallbladder Cancer: Malat1.

Gastric Cancer: H19, Hotair, Meg3, Pvt1, Terc.

Glioma: H19, Hotair, Meg3.

Kidney Cancer: Wt1os.

Laryngeal Squamous Cell Carcinoma: Hotair, Malat1.

Leukemia: Dleu2, Gas5, H19, Hotair, Malat1, Meg3, Terc, Tug1, Xist.

Liver Cancer: H19, Hotair, Hottip, Kcnq1ot1, Malat1, Meg3.

Melanoma: Hotair.

Multiple Myeloma: Meg3, Pvt1.

Nasopharyngeal Carcinoma: Hotair.

Non-Small Cell Lung Cancer: Hotair, Malat1, Meg3.

Osteosarcoma: Tug1.

Ovarian Cancer: H19, Hotair, Wt1os, Xist.

Pancreatic Cancer: Gas5, Hotair, Pvt1.

Pituitary Cancer: Meg3.

Prostate Cancer: Gas5, Hotair, Malat1, Pvt1, Terc, Xist.

Rhabdomyosarcoma: Rmst.

Sporadic Pediatric Adrenocortical Tumors: Kcnq1ot1.

Testicular Cancer: Xist.

Known or Predicted Associations with Cancer-Related miRNA: 1700020I14Rik, 1700034P13Rik, 2410006H16Rik, 9530026P05Rik, 9530059O14Rik, A530072M11Rik, A930011O12Rik, AI504432, C130071C03Rik, C230004F18Rik, D430040D24Rik, F730043M19Rik, Firre, Gas5, Gm13972, Gm15832, Gm17276, Gm20427, Gm6288, Meg3, Miat, Pvt1, Rian, Rmst.

Located Proximal to Oncogenes & Tumor Suppressor Genes: 1010001N08Rik, 1110028F18Rik, 1700006J14Rik, 1700015O11Rik, 1700016P03Rik, 4930593C16Rik, 4933408N05Rik, 6330410L21Rik, 7530422B04Rik, 8030451A03Rik, 9230105E05Rik, 9330179D12Rik, 9630013D21Rik, AU040972, E030019B13Rik, Gm10548, Gm11464, Gm11655, Gm11656, Gm11657, Gm12352, Gm12606, Gm12682, Gm12703, Gm12811, Gm13116, Gm13425, Gm15051, Gm15706, Gm16006, Gm16117, Gm16224, Gm16542, Gm19557, Gm20645, Gm22053, Gm23833, Gm24860, Gm25694, Gm26577, Gm26625, Gm9917, LOC102633315.

Other Cancer-Related lncRNAs: 5430425K12Rik, Airn, Emx2os, Ftx, Hoxa11os, lpw, Jpx, Nespas, Nron, Rmrp, Trp53cor1, Tsix.

Related products

For optimal performance, RT² lncRNA 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 First Strand Kit (50)	Enzymes and reagents for cDNA synthesis	330404
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 lncRNA qPCR Assays	Laboratory-verified qPCR assays for lncRNA expression	Varies
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 lncRNA 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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Find out more at www.qiagen.com/search/rt2-lncRNA-pcr-arrays!

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