RT² lncRNA PCR Array (Rotor-Gene® Format)

Mouse Cell Development & Differentiation

Cat. no. 330721 LAMM-003ZR

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

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

Description

The Mouse Cell Development & Differentiation RT² lncRNA PCR Array profiles the expression of 84 long noncoding RNAs (lncRNAs) differentially expressed during cellular differentiation and organism development. This array provides researchers with a convenient and accurate way to analyze the lncRNAs most relevant to cell fate and cell lineage decisions. These lncRNAs have been carefully selected based on results published in peer-reviewed journals that suggest a correlation with different stages of development from stem cells to terminal differentiation. The profiling results from this array can potentially serve as a useful molecular marker for specific stem cells, may yield insights into the molecular mechanisms behind specific stem cell differentiation processes, and/or possibly help identify lncRNAs associated with the function of specific mature cells or tissue 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-based real-time PCR, the expression of a focused panel of lncRNAs related to development and differentiation 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 lncRNA PCR Array

Position	UniGene	GenBank	Symbol	Description
A01	Mm.347369	ENSMUST00000179515	0610012G03Rik	RIKEN cDNA 0610012G03 gene
A02	Mm.217880	ENSMUST00000180923	1700007L15Rik	RIKEN cDNA 1700007L15 gene
A03	Mm.379181	ENSMUST00000147425	1700020I14Rik	RIKEN cDNA 1700020I14 gene
A04	N/A	NR_027956	1700052K11Rik	RIKEN cDNA 1700052K11 gene
A05	Mm.48776	ENSMUST00000181757	1700086O06Rik	RIKEN cDNA 1700086O06 gene
A06	N/A	ENSMUST00000122881	2610307P16Rik	RIKEN cDNA 2610307P16 gene
A07	Mm.487240	ENSMUST00000180567	2810429I04Rik	RIKEN cDNA 2810429I04 gene
A08	N/A	ENSMUST00000181230	4833428L15Rik	RIKEN cDNA 4833428L15 gene
A09	N/A	ENSMUST00000093873	4930581F22Rik	RIKEN cDNA 4930581F22 gene
A10	N/A	ENSMUST00000151866	4930594C11Rik	G1 to S phase transition pseudogene
A11	N/A	ENSMUST00000125305	5730457N03Rik	RIKEN cDNA 5730457N03 gene
A12	N/A	ENSMUST00000091324	5930412G12Rik	RIKEN cDNA 5930412G12 gene
B01	Mm.359054	ENSMUST00000098901	6820431F20Rik	Cadherin 11 pseudogene
B02	Mm.226434	ENSMUST00000101535	9330158H04Rik	RIKEN cDNA 9330158H04 gene
B03	Mm.486022	ENSMUST00000180445	9330175E14Rik	RIKEN cDNA 9330175E14 gene
B04	N/A	ENSMUST00000180878	9530036O11Rik	RIKEN cDNA 9530036O11Rik
B05	Mm.230853	ENSMUST00000180730	9930014A18Rik	RIKEN cDNA 9930014A18 gene
B06	Mm.441458	ENSMUST00000128469	A530058N18Rik	RIKEN cDNA A530058N18 gene

Position	UniGene	GenBank	Symbol	Description
B07	Mm.194050	ENSMUST00000180610	A930011O12Rik	RIKEN cDNA A930011O12 gene
B08	Mm.41661	ENSMUST00000180881	AI854517	Expressed sequence AI854517
B09	Mm.26678	ENSMUST00000095938	AI854703	Expressed sequence AI854703
B10	Mm.26553	ENSMUST00000079529	Airn	Antisense Igf2r RNA
B11	N/A	ENSMUST00000120127	Amd-ps1	S-adenosylmethionine decarboxylase, pseudogene 1 [Source:MGI Symbol;Acc:MGI:1310005]
B12	N/A	ENSMUST00000122215	Anp32b-ps1	Bacidic (leucine-rich) nuclear phosphoprotein 32 family, member B, pseudogene 1
C01	Mm.245636	ENSMUST00000052354	C130071C03Rik	RIKEN cDNA C130071C03 gene
C02	Mm.86664	ENSMUST00000034183	Crnde	Colorectal neoplasia differentially expressed (non-protein coding)
C03	N/A	NR_028416	D630041G03Rik	RIKEN cDNA D630041G03 gene
C04	N/A	NR_015456	D7Ertd715e	DNA segment, Chr 7, ERATO Doi 715, expressed
C05	Mm.46547	ENSMUST00000066220	Dancr	RIKEN cDNA 2700023E23 gene
C06	Mm.479394	ENSMUST00000181693	Dio3os	Deiodinase, iodothyronine type III, opposite strand
C07	N/A	ENSMUST00000122990	Dlx1as	Distal-less homeobox 1, antisense
C08	Mm.94021	ENSMUST00000159113	Dlx6os1	Dlx6 opposite strand transcript 1
C09	N/A	ENSMUST00000145525	E130215H24Rik	RIKEN cDNA E130215H24 gene
C10	N/A	ENSMUST00000184343	EGOT	EGOT conserved intronic region [Source:RFAM;Acc:RF01958]
C11	N/A	ENSMUST00000136990	Emx2os	Emx2 opposite strand/antisense transcript (non-protein coding)
C12	Mm.246916	ENSMUST00000181231	Fendrr	Foxf1 adjacent non-coding developmental regulatory RNA
D01	N/A	ENSMUST00000124842	Firre	Functional intergenic repeating RNA element
D02	Mm.231287	ENSMUST00000123272	Foxd2os	RIKEN cDNA 9130206I24 gene
D03	N/A	ENSMUST00000135347	Frmd8os	FERM domain containing 8, opposite strand
D04	N/A	ENSMUST00000180509	G730013B05Rik	RIKEN cDNA G730013B05 gene
D05	Mm.486180	ENSMUST00000065709	Gas5	Growth arrest specific 5
D06	N/A	ENSMUST00000124503	Gm12122	Predicted gene 12122 [Source:MGI Symbol;Acc:MGI:3650741]
D07	N/A	ENSMUST00000117553	Gm13929	Predicted gene 13929 [Source:MGI Symbol;Acc:MGI:3649396]
D08	N/A	ENSMUST00000123016	Gm14204	Predicted gene 14204
D09	Mm.185068	ENSMUST00000124439	Gm14207	Predicted gene 14207
D10	N/A	ENSMUST00000120011	Gm14913	Predicted gene 14913 [Source:MGI Symbol;Acc:MGI:3705431]
D11	N/A	ENSMUST00000129546	Gm15051	Predicted gene 15051 [Source:MGI Symbol;Acc:MGI:3705155]
D12	N/A	ENSMUST00000182477	Gm17750	Predicted gene, 17750
E01	N/A	ENSMUST00000183083	Gm20748	Predicted gene, 20748
E02	Mm.213632	ENSMUST00000180700	Gm2694	Predicted gene 2694
E03	Mm.490776	NR_001592	H19	H19 fetal liver mRNA
E04	N/A	ENSMUST00000151949	Hotair	HOX transcript antisense RNA (non-protein coding)
E05	N/A	ENSMUST00000141300	Hottip	Hoxa distal transcript antisense RNA
E06	Mm.469918	ENSMUST00000134512	Hoxa11os	HOXA11 antisense RNA (non-protein coding)
E07	Mm.440180	ENSMUST00000	Igf2os	Insulin-like growth factor 2, antisense

Position	UniGene	GenBank	Symbol	Description
		124393		
E08	Mm.491385	NR_015351	Ipw	Imprinted gene in the Prader-Willi syndrome region
E09	N/A	ENSMUST00000 181020	Jpx	Jpx transcript, Xist activator (non-protein coding)
E10	Mm.381306	ENSMUST00000 130683	Kcnd3os	Potassium voltage-gated channel, Shal-related family, member 3, opposite strand
E11	N/A	NR_001461	Kcnq1ot1	KCNQ1 overlapping transcript 1
E12	N/A	ENSMUST00000 126072	Lhx1os	LIM homeobox 1, opposite strand
F01	N/A	ENSMUST00000 127359	LOC102638 002	Uncharacterized LOC102638002
F02	N/A	ENSMUST00000 172812	Malat1	Metastasis associated lung adenocarcinoma transcript 1 (non-coding RNA)
F03	Mm.442513	ENSMUST00000 124106	Meg3	Maternally expressed 3
F04	Mm.44854	ENSMUST00000 181535	Miat	Myocardial infarction associated transcript (non-protein coding)
F05	Mm.486199	ENSMUST00000 181496	Mirg	MiRNA containing gene
F06	N/A	NR_027920	Msx1os	Msh homeobox 1 opposite strand
F07	Mm.265130	ENSMUST00000 123668	Nctc1	Non-coding transcript 1
F08	N/A	ENSMUST00000 173672	Neat1	Nuclear paraspeckle assembly transcript 1 (non-protein coding)
F09	N/A	ENSMUST00000 136998	Nkx2-2os	NK2 homeobox 2, opposite strand
F10	Mm.108566	ENSMUST00000 181489	Panct2	Pluripotency-associated noncoding transcript 2
F11	Mm.159038	ENSMUST00000 036304	Pldi	Polymorphic derived intron containing
F12	Mm.46194	ENSMUST00000 153297	Plekhd1os	RIKEN cDNA 0610009B14 gene
G01	Mm.293263	ENSMUST00000 180876	Rian	RNA imprinted and accumulated in nucleus
G02	Mm.429764	ENSMUST00000 181213	Rmst	Rhabdomyosarcoma 2 associated transcript (non-coding RNA)
G03	Mm.150838	ENSMUST00000 159030	Six3os1	Six3 opposite strand transcript 1
G04	N/A	ENSMUST00000 180659	Snhg7	Small nucleolar RNA host gene 7
G05	N/A	NR_028574	Snhg8	Small nucleolar RNA host gene 8
G06	N/A	ENSMUST00000 163261	Sox2ot	SOX2 overlapping transcript (non-protein coding)
G07	N/A	ENSMUST00000 152916	Tsix	X (inactive)-specific transcript, opposite strand
G08	N/A	ENSMUST00000 132077	Tug1	Taurine upregulated gene 1
G09	N/A	ENSMUST00000 180458	Tunar	Tcl1 upstream neural differentiation associated RNA
G10	Mm.491552	ENSMUST00000 123402	Vax2os	Vax2 opposite strand transcript 1
G11	N/A	ENSMUST00000 099647	Wt1os	Wilms tumor 1 homolog, opposite strand
G12	Mm.472939	ENSMUST00000 127786	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	ENSMUST00000 083103	Rn7sk	RNA, 7SK, nuclear
H05	N/A	ENSMUST00000 083419	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:

Adult Neural Stem Cells: 2810429I04Rik, 4833428L15Rik, 4930581F22Rik, 5930412G12Rik, 6820431F20Rik, 9330158H04Rik, 9330175E14Rik, 9530036O11Rik, A530058N18Rik, A930011O12Rik, AI854517, AI854703, Airn, C130071C03Rik, D630041G03Rik, Dlx6os1, E130215H24Rik, Foxd2os, Gm14204, Gm2694, Kcnd3os, Lhx1os, Plekhd1os, Six3os1.

Cardiomyocyte Differentiation: Gm12122, Gm13929, Gm15051, LOC102638002.

Cell-Fate Programming & Reprogramming: Dlx1as, Dlx6os1, Fendrr, Gm20748, Hotair, Hottip, Jpx, Meg3, Six3os1, Tsix, Tunar, Xist.

Embryonic & Induced Pluripotent Stem Cells: 1700007L15Rik, G730013B05Rik, Mirg, Panct2, Rian, Tsix.

Embryonic Development: 0610012G03Rik, 1700020I14Rik, Emx2os, Gas5, Malat1, Msx1os, Sox2ot.

Embryonic Stem Cell Pluripotency & Differentiation: 1700007L15Rik, 1700052K11Rik, 1700086O06Rik, 5730457N03Rik, C130071C03Rik, D7Ertd715e, Frmd8os, G730013B05Rik, Gm14913, Malat1, Neat1, Snhg7, Tsix, Tug1.

Mesenchymal Stem Cells & Osteoblast Differentiation: 1700018A04Rik, 1700031M16Rik, 2810433D01Rik, 4930594C11Rik, Amd-ps1, Anp32b-ps1, Gm11869, Gm12180, Gm12846, Gm13730, Gm14081, Gm14788, Gm15066, Gm15242, Gm15645, Gm16102, Gm16229, Gm17138, Gm5185, Gm5383, Gm5385, Gm6024, Gm6298, Gm6506, Gm9064, Gm9252, LOC102634174, LOC102636919, LOC102639548, LOC102639814, Meg3.

Neurogenesis: 1700020I14Rik, 2610307P16Rik, 9930014A18Rik, Dio3os, Dlx1as, Dlx6os1, Emx2os, Gm14207, Gm17750, Kcnq1ot1, Malat1, Miat, Neat1, Nkx2-2os, Rmst, Six3os1, Snhg8, Tug1.

Skeletal Muscle Development: H19, Malat1, Meg3, Nctc1, Neat1.

Known or Predicted Associations with Cell Differentiation & Development -Related miRNA: 9530026P05Rik, A330076H08Rik, C230004F18Rik, D430040D24Rik, F730043M19Rik, Firre, Gm13972, Gm17276.

Other Differentiation & Development Related lncRNAs: Crnde, Dancr, Egot, Hoxa11os, Igf2os, Ipw, Pldi, Vax2os, Wt1os.

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.
RT² First Strand Kit (12)	Enzymes and reagents for cDNA synthesis	330401
RT² First Strand Kit (50)	Enzymes and reagents for cDNA synthesis	330404
RT² 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
RT² lncRNA qPCR Assays	Laboratory-verified qPCR assays for lncRNA expression	Varies
RT² 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
RT² 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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