

RT² Profiler PCR Array (Rotor-Gene[®] Format)

Mouse Homeobox (HOX) Genes

Cat. no. 330231 PAMM-083ZR

For pathway expression analysis

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

Description

The Mouse Homeobox (HOX) Genes RT² Profiler PCR Array profiles the expression of 84 HOX genes involved in multicellular organismal development. HOX genes encode a group of homeodomain-containing transcription factors, which were initially described as controlling segmental patterning during development. Recently, their importance has been reemphasized by stem cell and cancer researches. Although these HOX genes have been grouped according to their established roles in multicellular organismal development, their true function in your cellular systems is waiting to be discovered by you. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of HOX genes with this array.

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

Shipping and storage

RT² 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 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

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 Profiler PCR Array

| Position | UniGene | GenBank | Symbol | Description |
|----------|-----------|--------------|--------|--|
| A01 | Mm.19287 | NM_172553 | Alx1 | ALX homeobox 1 |
| A02 | Mm.10112 | NM_007441 | Alx3 | Aristaless-like homeobox 3 |
| A03 | Mm.389389 | NM_007442 | Alx4 | Aristaless-like homeobox 4 |
| A04 | Mm.275547 | NM_007492 | Arx | Aristaless related homeobox |
| A05 | Mm.42241 | NM_007526 | Barx1 | BarH-like homeobox 1 |
| A06 | Mm.144448 | NM_009880 | Cdx1 | Caudal type homeobox 1 |
| A07 | Mm.20358 | NM_007673 | Cdx2 | Caudal type homeobox 2 |
| A08 | Mm.4353 | NM_007674 | Cdx4 | Caudal type homeobox 4 |
| A09 | Mm.320317 | NM_009986 | Cux1 | Cut-like homeobox 1 |
| A10 | Mm.4543 | NM_010053 | Dlx1 | Distal-less homeobox 1 |
| A11 | Mm.3896 | NM_010054 | Dlx2 | Distal-less homeobox 2 |
| A12 | Mm.5194 | NM_010055 | Dlx3 | Distal-less homeobox 3 |
| B01 | Mm.439766 | NM_007867 | Dlx4 | Distal-less homeobox 4 |
| B02 | Mm.4873 | NM_198854 | Dlx5 | Distal-less homeobox 5 |
| B03 | Mm.439763 | NM_010057 | Dlx6 | Distal-less homeobox 6 |
| B04 | Mm.213206 | NM_130865 | Dmbx1 | Diencephalon/mesencephalon homeobox 1 |
| B05 | Mm.391473 | NM_010131 | Emx1 | Empty spiracles homolog 1 (Drosophila) |
| B06 | Mm.245394 | NM_010132 | Emx2 | Empty spiracles homolog 2 (Drosophila) |
| B07 | Mm.2657 | NM_010133 | En1 | Engrailed 1 |
| B08 | Mm.4298 | NM_010134 | En2 | Engrailed 2 |
| B09 | Mm.4802 | NM_010420 | Hesx1 | Homeobox gene expressed in ES cells |
| B10 | Mm.33896 | NM_008245 | Hhex | Hematopoietically expressed homeobox |
| B11 | Mm.1347 | NM_008250 | Hlx | H2.0-like homeobox |
| B12 | Mm.181852 | NM_175606 | Hopx | HOP homeobox |
| C01 | Mm.197 | NM_010449 | Hoxa1 | Homeobox A1 |
| C02 | Mm.294826 | NM_010455 | Hoxa7 | Homeobox A7 |
| C03 | Mm.4694 | NM_010456 | Hoxa9 | Homeobox A9 |
| C04 | Mm.890 | NM_008266 | Hoxb1 | Homeobox B1 |
| C05 | Mm.281153 | NM_134032 | Hoxb2 | Homeobox B2 |
| C06 | Mm.342481 | NM_010458 | Hoxb3 | Homeobox B3 |
| C07 | Mm.3546 | NM_010459 | Hoxb4 | Homeobox B4 |
| C08 | Mm.390366 | NM_010460 | Hoxb7 | Homeobox B7 |
| C09 | Mm.4822 | NM_010461 | Hoxb8 | Homeobox B8 |
| C10 | Mm.258271 | NM_008270 | Hoxb9 | Homeobox B9 |
| C11 | Mm.31665 | NM_010462 | Hoxc10 | Homeobox C10 |
| C12 | Mm.37692 | NM_001024842 | Hoxc11 | Homeobox C11 |
| D01 | Mm.221179 | NM_010463 | Hoxc12 | Homeobox C12 |
| D02 | Mm.207062 | NM_010464 | Hoxc13 | Homeobox C13 |
| D03 | Mm.4444 | NM_010465 | Hoxc6 | Homeobox C6 |
| D04 | Mm.6167 | NM_010466 | Hoxc8 | Homeobox C8 |
| D05 | Mm.4765 | NM_008272 | Hoxc9 | Homeobox C9 |
| D06 | Mm.4932 | NM_010467 | Hoxd1 | Homeobox D1 |
| D07 | Mm.57124 | NM_008274 | Hoxd12 | Homeobox D12 |
| D08 | Mm.57227 | NM_008275 | Hoxd13 | Homeobox D13 |
| D09 | Mm.430708 | NM_010468 | Hoxd3 | Homeobox D3 |
| D10 | Mm.482194 | NM_010469 | Hoxd4 | Homeobox D4 |
| D11 | Mm.280673 | NM_008276 | Hoxd8 | Homeobox D8 |
| D12 | Mm.26544 | NM_013555 | Hoxd9 | Homeobox D9 |
| E01 | Mm.42242 | NM_021459 | Isl1 | ISL1 transcription factor, LIM/homeodomain |
| E02 | Mm.273996 | NM_027397 | Isl2 | Insulin related protein 2 (islet 2) |
| E03 | Mm.116815 | NM_010691 | Lbx1 | Ladybird homeobox homolog 1 (Drosophila) |
| E04 | Mm.20359 | NM_010692 | Lbx2 | Ladybird homeobox homolog 2 (Drosophila) |
| E05 | Mm.4965 | NM_008498 | Lhx1 | LIM homeobox protein 1 |
| E06 | Mm.330081 | NM_033652 | Lmx1a | LIM homeobox transcription factor 1 alpha |
| E07 | Mm.39825 | NM_010725 | Lmx1b | LIM homeobox transcription factor 1 beta |
| E08 | Mm.356578 | NM_010789 | Meis1 | Meis homeobox 1 |
| E09 | Mm.3404 | NM_010791 | Meox1 | Mesenchyme homeobox 1 |

| Position | UniGene | GenBank | Symbol | Description |
|----------|-----------|-----------|----------|---|
| E10 | Mm.103647 | NM_013729 | Mixl1 | Mix1 homeobox-like 1 (Xenopus laevis) |
| E11 | Mm.257186 | NM_177595 | Mkx | Mohawk homeobox |
| E12 | Mm.256509 | NM_010835 | Msx1 | Homeobox, msh-like 1 |
| F01 | Mm.1763 | NM_013601 | Msx2 | Homeobox, msh-like 2 |
| F02 | Mm.3520 | NM_010921 | Nkx3-1 | NK-3 transcription factor, locus 1 (Drosophila) |
| F03 | Mm.42051 | NM_011021 | Otp | Orthopedia homolog (Drosophila) |
| F04 | Mm.129663 | NM_011023 | Otx1 | Orthodenticle homolog 1 (Drosophila) |
| F05 | Mm.134516 | NM_144841 | Otx2 | Orthodenticle homolog 2 (Drosophila) |
| F06 | Mm.1371 | NM_008781 | Pax3 | Paired box gene 3 |
| F07 | Mm.389714 | NM_008814 | Pdx1 | Pancreatic and duodenal homeobox 1 |
| F08 | Mm.62505 | NM_008888 | Phox2b | Paired-like homeobox 2b |
| F09 | Mm.135195 | NM_011097 | Pitx1 | Paired-like homeodomain transcription factor 1 |
| F10 | Mm.246804 | NM_011098 | Pitx2 | Paired-like homeodomain transcription factor 2 |
| F11 | Mm.6255 | NM_008852 | Pitx3 | Paired-like homeodomain transcription factor 3 |
| F12 | Mm.17031 | NM_013633 | Pou5f1 | POU domain, class 5, transcription factor 1 |
| G01 | Mm.1386 | NM_008936 | Prop1 | Paired like homeodomain factor 1 |
| G02 | Mm.132579 | NM_008937 | Prox1 | Prospero-related homeobox 1 |
| G03 | Mm.39093 | NM_013665 | Shox2 | Short stature homeobox 2 |
| G04 | Mm.4645 | NM_009189 | Six1 | Sine oculis-related homeobox 1 homolog (Drosophila) |
| G05 | Mm.5039 | NM_011380 | Six2 | Sine oculis-related homeobox 2 homolog (Drosophila) |
| G06 | Mm.370208 | NM_011381 | Six3 | Sine oculis-related homeobox 3 homolog (Drosophila) |
| G07 | Mm.249575 | NM_011382 | Six4 | Sine oculis-related homeobox 4 homolog (Drosophila) |
| G08 | Mm.57138 | NM_011384 | Six6 | Sine oculis-related homeobox 6 homolog (Drosophila) |
| G09 | Mm.391203 | NM_021901 | Tlx1 | T-cell leukemia, homeobox 1 |
| G10 | Mm.23801 | NM_009501 | Vax1 | Ventral anterior homeobox containing gene 1 |
| G11 | Mm.307165 | NM_011912 | Vax2 | Ventral anterior homeobox containing gene 2 |
| G12 | Mm.207061 | NM_054068 | Vsx1 | Visual system homeobox 1 homolog (zebrafish) |
| H01 | Mm.328431 | NM_007393 | Actb | Actin, beta |
| H02 | Mm.163 | NM_009735 | B2m | Beta-2 microglobulin |
| H03 | Mm.343110 | NM_008084 | Gapdh | Glyceraldehyde-3-phosphate dehydrogenase |
| H04 | Mm.3317 | NM_010368 | Gusb | Glucuronidase, beta |
| H05 | Mm.2180 | NM_008302 | Hsp90ab1 | Heat shock protein 90 alpha (cytosolic), class B member 1 |
| 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 |

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 ROX [™] 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.

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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