

RT² Profiler PCR Array (Rotor-Gene® Format)

Mouse Osteogenesis

Cat. no. 330231 PAMM-026ZR

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 Osteogenesis RT² Profiler PCR Array profiles the expression of 84 genes related to osteogenic differentiation. This array contains genes functioning in the development of the skeletal system as well as bone mineral metabolism. Growth factors and genes mediating osteogenesis and related cell growth, proliferation, and differentiation processes are included. Also represented are the extracellular matrix molecules and cell adhesion molecules involved in bone development. Using real-time PCR, you can easily and reliably analyze expression of a focused panel of genes related to osteogenic differentiation 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.689	NM_007394	Acvr1	Activin A receptor, type 1
A02	Mm.197554	NM_013465	Ahsg	Alpha-2-HS-glycoprotein
A03	Mm.288186	NM_007431	Alpl	Alkaline phosphatase, liver/bone/kidney
A04	Mm.1620	NM_009673	Anxa5	Annexin A5
A05	Mm.389459	NM_007541	Bglap	Bone gamma carboxyglutamate protein
A06	Mm.2608	NM_007542	Bgn	Biglycan
A07	Mm.27757	NM_009755	Bmp1	Bone morphogenetic protein 1
A08	Mm.103205	NM_007553	Bmp2	Bone morphogenetic protein 2
A09	Mm.209571	NM_173404	Bmp3	Bone morphogenetic protein 3
A10	Mm.6813	NM_007554	Bmp4	Bone morphogenetic protein 4
A11	Mm.428950	NM_007555	Bmp5	Bone morphogenetic protein 5
A12	Mm.385759	NM_007556	Bmp6	Bone morphogenetic protein 6
B01	Mm.595	NM_007557	Bmp7	Bone morphogenetic protein 7
B02	Mm.237825	NM_009758	Bmpr1a	Bone morphogenetic protein receptor, type 1A
B03	Mm.39089	NM_007560	Bmpr1b	Bone morphogenetic protein receptor, type 1B
B04	Mm.7106	NM_007561	Bmpr2	Bone morphogenic protein receptor, type II (serine/threonine kinase)
B05	Mm.18628	NM_007643	Cd36	CD36 antigen
B06	Mm.1571	NM_009866	Cdh11	Cadherin 11
B07	Mm.20457	NM_009893	Chrd	Chordin
B08	Mm.443177	NM_009925	Col10a1	Collagen, type X, alpha 1
B09	Mm.297859	NM_181277	Col14a1	Collagen, type XIV, alpha 1
B10	Mm.277735	NM_007742	Col1a1	Collagen, type I, alpha 1
B11	Mm.277792	NM_007743	Col1a2	Collagen, type I, alpha 2
B12	Mm.2423	NM_031163	Col2a1	Collagen, type II, alpha 1
C01	Mm.249555	NM_009930	Col3a1	Collagen, type III, alpha 1
C02	Mm.738	NM_009931	Col4a1	Collagen, type IV, alpha 1
C03	Mm.7281	NM_015734	Col5a1	Collagen, type V, alpha 1
C04	Mm.45071	NM_016685	Comp	Cartilage oligomeric matrix protein
C05	Mm.795	NM_007778	Csf1	Colony stimulating factor 1 (macrophage)
C06	Mm.4922	NM_009969	Csf2	Colony stimulating factor 2 (granulocyte-macrophage)
C07	Mm.1238	NM_009971	Csf3	Colony stimulating factor 3 (granulocyte)
C08	Mm.272085	NM_007802	Ctsk	Cathepsin K
C09	Mm.4873	NM_198854	Dlx5	Distal-less homeobox 5
C10	Mm.252481	NM_010113	Egf	Epidermal growth factor
C11	Mm.241282	NM_010197	Fgf1	Fibroblast growth factor 1
C12	Mm.473689	NM_008006	Fgf2	Fibroblast growth factor 2
D01	Mm.265716	NM_010206	Fgfr1	Fibroblast growth factor receptor 1
D02	Mm.16340	NM_010207	Fgfr2	Fibroblast growth factor receptor 2
D03	Mm.389712	NM_010228	Fit1	FMS-like tyrosine kinase 1
D04	Mm.193099	NM_010233	Fn1	Fibronectin 1
D05	Mm.432071	NM_145741	Gdf10	Growth differentiation factor 10
D06	Mm.391450	NM_010296	Gli1	GLI-Kruppel family member GLI1
D07	Mm.435508	NM_010493	Icam1	Intercellular adhesion molecule 1
D08	Mm.268521	NM_010512	Igf1	Insulin-like growth factor 1
D09	Mm.275742	NM_010513	Igf1r	Insulin-like growth factor I receptor
D10	Mm.439736	NM_010544	Ilhh	Indian hedgehog
D11	Mm.5007	NM_008396	Itga2	Integrin alpha 2
D12	Mm.26646	NM_010575	Itga2b	Integrin alpha 2b
E01	Mm.57035	NM_013565	Itga3	Integrin alpha 3
E02	Mm.262106	NM_008401	Itgam	Integrin alpha M
E03	Mm.227	NM_008402	Itgav	Integrin alpha V
E04	Mm.263396	NM_010578	Itgb1	Integrin beta 1 (fibronectin receptor beta)
E05	Mm.14126	NM_019471	Mmp10	Matrix metalloproteinase 10
E06	Mm.29564	NM_008610	Mmp2	Matrix metalloproteinase 2
E07	Mm.16415	NM_008611	Mmp8	Matrix metalloproteinase 8
E08	Mm.4406	NM_013599	Mmp9	Matrix metalloproteinase 9
E09	Mm.256765	NM_008689	Nfkb1	Nuclear factor of kappa light polypeptide gene enhancer in B-cells 1, p105

Position	UniGene	GenBank	Symbol	Description
E10	Mm.135266	NM_008711	Nog	Noggin
E11	Mm.2675	NM_008808	Pdgfa	Platelet derived growth factor, alpha
E12	Mm.2529	NM_011077	Phex	Phosphate regulating gene with homologies to endopeptidases on the X chromosome (hypophosphatemia, vitamin D resistant rickets)
F01	Mm.391013	NM_009820	Runx2	Runt related transcription factor 2
F02	Mm.22708	NM_009825	Serpinh1	Serine (or cysteine) peptidase inhibitor, clade H, member 1
F03	Mm.223717	NM_008539	Smad1	MAD homolog 1 (Drosophila)
F04	Mm.391091	NM_010754	Smad2	MAD homolog 2 (Drosophila)
F05	Mm.7320	NM_016769	Smad3	MAD homolog 3 (Drosophila)
F06	Mm.100399	NM_008540	Smad4	MAD homolog 4 (Drosophila)
F07	Mm.272920	NM_008541	Smad5	MAD homolog 5 (Drosophila)
F08	Mm.265602	NM_024449	Sost	Sclerostin
F09	Mm.286407	NM_011448	Sox9	SRY-box containing gene 9
F10	Mm.263284	NM_130458	Sp7	Sp7 transcription factor 7
F11	Mm.288474	NM_009263	Spp1	Secreted phosphoprotein 1
F12	Mm.248380	NM_011577	Tgfb1	Transforming growth factor, beta 1
G01	Mm.18213	NM_009367	Tgfb2	Transforming growth factor, beta 2
G02	Mm.3992	NM_009368	Tgfb3	Transforming growth factor, beta 3
G03	Mm.197552	NM_009370	Tgfb1r1	Transforming growth factor, beta receptor I
G04	Mm.172346	NM_009371	Tgfb1r2	Transforming growth factor, beta receptor II
G05	Mm.200775	NM_011578	Tgfb1r3	Transforming growth factor, beta receptor III
G06	Mm.1293	NM_013693	Tnf	Tumor necrosis factor
G07	Mm.249221	NM_011613	Tnfsf11	Tumor necrosis factor (ligand) superfamily, member 11
G08	Mm.3280	NM_011658	Twist1	Twist homolog 1 (Drosophila)
G09	Mm.76649	NM_011693	Vcam1	Vascular cell adhesion molecule 1
G10	Mm.245084	NM_009504	Vdr	Vitamin D receptor
G11	Mm.282184	NM_009505	Vegfa	Vascular endothelial growth factor A
G12	Mm.15607	NM_011697	Vegfb	Vascular endothelial growth factor B
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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