

QIAseq Targeted RNA Panels

Mouse Stem Cell & Differentiation Markers

Cat. no. 333002 RMM-008Z

For gene expression profiling by RNA sequencing with laboratory-verified primer sets

The Mouse Stem Cell & Differentiation Markers QIAseq Targeted RNA Panel profiles the expression of 293 genes involved in stem cell biology, pluripotency, lineage commitment and terminal differentiation. Embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs) hold great potential in treating diseases and injuries. While iPSCs generated from adult somatic cells avoid ethical issues associated with ESC use, the two cell types have proven not to be functionally identical and developing these cells into safe therapeutic agents requires a better understanding of the control mechanisms for cell lineage commitment and differentiation. Mesenchymal stem cells (MSCs) are a third class of multipotent cells that may be a valuable resource for regenerative medicine as they are easily isolated and expanded in vitro. Protocols for cell isolation, induction and maintenance of pluripotency and subsequent differentiation into the myriad somatic cell types are constantly being refined, and several classes of genes must be analyzed simultaneously in order to properly characterize the resulting lines. This panel contains genes relevant to iPSC generation including iPSC reprogramming factors and markers of commonly used somatic cells. Also included are specific markers of ESCs and iPSCs and their early differentiation into germ layers, genes involved in maintaining pluripotency, markers of progenitor and multipotent cells including MSC-specific genes, as well as markers of 39 terminally differentiated cell types. Using digital RNA sequencing, the expression of a broad spectrum of genes involved in pluripotent and multipotent stem cell biology, lineage commitment, and terminal differentiation can be analyzed with this primer pool.

For further details, consult the *QIAseq Targeted RNA Panel Handbook*.

Panel is enough for 12 samples.

Shipping and storage

QIAseq Targeted RNA Panels are shipped in two boxes: box 1 of 2 is shipped on dry ice and box 2 of 2 is shipped on blue ice. For long-term storage, keep the contents of box 1 at -20°C and the contents of box 2 at 4°C . If stored under these conditions, the panels are stable for 8 months after receipt.

Note: Open the package and store the products appropriately immediately upon receipt.



Sample to Insight

Panel Contents

Contents	Volume
RNase-free water	1000 μ l
Control P2	12 μ l
Buffer GE	24 μ l
RE3 Reverse Transcriptase Mix	24 μ l
5x Buffer BC3	48 μ l
QIAseq RNA 5x Buffer	300 μ l
HotStarTaq DNA Polymerase (6U / μ l)	60 μ l
RS2 Primer (10 μ M)	20 μ l
BC Primer Mix	80 μ l
LA Primer Mix	80 μ l
QIAseq Beads	4 ml

Gene table: QIAseq Targeted RNA Panels

Gene symbol	Gene symbol	Gene symbol	Gene symbol
Abcb1a	Abcb1b	Acan	Acta2
Actc1	Adgre1	Adipoq	Aicda
Alb	Alcam	Aldh1a1	Aldh2
Alpl	Anpep	Anxa5	Apc
Apoh	Aqp1	Aqp2	Bdnf
Bglap	Bglap2	Bmp2	Bmp4
Bmp6	Bmp7	Brix1	Calcr
Casp3	Cav3	Ccna2	Ccne1
Ccr5	Cd34	Cd3e	Cd44
Cd79a	Cd9	Cdc42	Cdh1
Cdh2	Cdh5	Cdk1	Chat
Chd1	Chd7	Cnot3	Col10a1
Col1a1	Col2a1	Col9a1	Comp
Cpa1	Csf2	Csf3	Ctnnb1
Ctsk	Cxcr4	Cyp27b1	Dcn
Dcx	Des	Dll4	Dnmt3b
Dpp4	Dppa2	Dppa3	Dppa4
Dppa5a	Efnb2	Egf	Emx2
En2	Eng	Eno1	Ep300
ErbB2	Esrrb	Etv2	Fabp4
Fabp7	Fbrsl1	Fgf10	Fgf2
Fgf4	Fgf5	Fgfr1	Flii
Foxa1	Foxa2	Foxd3	Foxg1
Fut1	Fut4	Fzd9	G6pc
Gabrb3	Gad1	Gad2	Galc
Gata1	Gata2	Gata4	Gata6

Gene symbol	Gene symbol	Gene symbol	Gene symbol
Gbx2	Gcg	Gdf15	Gdf3
Gdf5	Gdf6	Gdf7	Gfap
Ghrl	Gja1	Gjb2	Grb7
Gsc	Gtf3a	Hand1	Hand2
Hat1	Hdac1	Hdac2	Hes5
Hgf	Hnf1a	Hnf4a	Hspa9
Ibsp	Icam1	Ifng	Igf1
Igf2	Il10	Il1b	Il6
Ins2	Isl1	Itga6	Itgam
Itgav	Itgax	Itgb1	Jag1
Kat2a	Kat2b	Kat5	Kat7
Kat8	Kdr	Kitl	Klf4
Krt1	Krt10	Krt14	Krt15
Krt19	Lefty1	Lefty2	Lif
Lin28a	Lyve1	Mafb	Map2
Map3k12	Map3k2	Mbp	Mcam
Meis1	Mesp1	Miox	Mitf
Mixl1	Mmp2	Msln	Mybl2
Myc	Mycn	Myh1	Myh11
Myh6	Myh7	Myl3	Myod1
Nanog	Nat1	Ncam1	Nefh
Nes	Neurod1	Neurog2	Ngfr
Nkx2-2	Nkx2-5	Nodal	Notch1
Nphs2	Nppa	Nr0b1	Nr2f2
Nr5a2	Nr6a1	Nrp1	Nrp2
Nt5e	Nudt6	Numb	Olig2
Otx2	Paf1	Pard6a	Pax6
Pde6b	Pdgfra	Pdgfrb	Pecam1
Pigs	Pmel	Podxl	Pou3f4
Pou4f2	Pou5f1	Pparg	Ppie
Ppil2	Ppy	Prdm14	Prom1
Prox1	Ptcra	Plk2	Ptprc
Rcvrn	Rest	Rfx1	Rif1
Rlbp1	Runx1	Runx2	Ryr2
Sall4	Scn1a	Sftpb	Sftpc
Sftpd	Slc17a5	Slc17a6	Slc17a7
Slc2a2	Slc32a1	Smad1	Smad2
Smad3	Smad4	Smtn	Smurf1
Smurf2	Sox15	Sox17	Sox2
Sox3	Sox7	Sox9	Sst
Stat3	Sycp3	T	Tal1
Tat	Tbx3	Tbx5	Tcf3
Tcl1	Tdgf1	Tek	Tert
Tgfb1	Tgfb3	Th	Thap11

Gene symbol	Gene symbol	Gene symbol	Gene symbol
Thap3	Tnf	Trim28	Trp53
Tubb3	Tyr	Tyrl	Umod
Uhf1	Vcam1	Vegfa	Vim
Vwf	Wnt3a	Zbtb22	Zfp42
Zfp446	Zfx	Zic1	_GDC_CONTROL_MUS_01_
_GDC_CONTROL_MUS_02_	_GDC_CONTROL_MUS_03_	_GDC_CONTROL_MUS_08_	_GDC_CONTROL_MUS_09_



Ordering Information

Product	Contents	Cat. no.
QIAseq Targeted RNA Panel (12)	Kit containing reagents for first strand synthesis, molecular barcoding, gene-specific amplification and QIAseq Beads for targeted RNA sequencing; fixed panel for 12 samples	333002
QIAseq Targeted RNA Panel (96)	Kit containing reagents for first strand synthesis, molecular barcoding, gene-specific amplification and QIAseq Beads for targeted RNA sequencing; fixed panel for 96 samples	333005
QIAseq Targeted RNA Extended Panel (12)	Kit containing reagents for first strand synthesis, molecular barcoding, gene-specific amplification and QIAseq Beads for targeted RNA sequencing; extended panel for 12 samples	333012
QIAseq Targeted RNA Extended Panel (96)	Kit containing reagents for first strand synthesis, molecular barcoding, gene-specific amplification and QIAseq Beads for targeted RNA sequencing; extended panel for 96 samples	333015
QIAseq Targeted RNA Custom Panel (12)	Kit containing reagents for first strand synthesis, molecular barcoding, gene-specific amplification and QIAseq Beads for targeted RNA sequencing; custom panel for 12 samples	333022
QIAseq Targeted RNA Custom Panel (96)	Kit containing reagents for first strand synthesis, molecular barcoding, gene-specific amplification and QIAseq Beads for targeted RNA sequencing; extended panel for 96 samples	333025
QIAseq Targeted RNA Custom Panel (384)	Kit containing reagents for first strand synthesis, molecular barcoding, gene-specific amplification and QIAseq Beads for targeted RNA sequencing; extended panel for 384 samples	333027
QIAseq Targeted RNA 12-index I (48)	Box containing oligos, enough for a total of 48 samples (for indexing up to 12 samples per run) and Custom Sequencing Primer for targeted RNA sequencing on Illumina platforms	333114
QIAseq Targeted RNA 96-index I (384)	Box containing oligos, enough for a total of 384 samples (for indexing up to 96 samples per run) and Custom Sequencing Primer for targeted RNA sequencing on Illumina platforms	333117
QIAseq Targeted RNA 96-index HT I (384)	Box containing oligos in arrays, enough for a total of 384 samples (for indexing up to 96 samples per	333127

Product	Contents	Cat. no.
	run) and Custom Sequencing Primer for targeted RNA sequencing on Illumina platforms	
QIAseq Targeted RNA 12-index L (48)	Box containing oligos, enough for a total of 48 samples (for indexing up to 12 samples per run) for targeted RNA sequencing on Ion Torrent platforms	333214
QIAseq Targeted RNA 96-index HT L (384)	Box containing oligos, enough for a total of 384 samples (for indexing up to 96 samples per run) for targeted RNA sequencing on Ion Torrent platforms	333217

QIAseq Targeted RNA Panels 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 or can be requested from QIAGEN Technical Services or your local distributor.

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Sample to Insight