

QIAseq Targeted RNA Panels

Mouse Apoptosis & Cell Death

Cat. no. 333002 RMM-002Z

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

The Mouse Apoptosis & Cell Death QIAseq Targeted RNA Panel profiles the expression of 264 genes involved in cell death, which can occur through 3 mechanisms: apoptosis, autophagy and necrosis. Apoptosis, or programmed cell death, results in controlled cell shrinkage and nuclear fragmentation via the action of caspases, as well as an anti-inflammatory cytokine release. In contrast, necrosis signals via RIPK1 (RIP1), leading to cell swelling, lysis and a pro-inflammatory cytokine release. Autophagy destroys the cell's damaged proteins and organelles via an intracellular catabolic process in the lysosome. Multiple physiological processes require the removal of specific cells by a controlled cell-death program. For example, tissue remodeling activates apoptosis, whereas energy metabolism and growth regulation responses rely on autophagy. Developmental processes often activate apoptosis, while bodily injuries or infection more commonly induce necrosis. The molecular mechanisms behind these cell death pathways overlap and can be co-activated by similar upstream stimuli. For example, apoptosis and necrosis both signal through the death domain receptors FAS, TNFRSF1A (TNFR1) and TNFRSF10A (TRAIL-R), while autophagy and apoptosis share BCL2 family members as key regulators. Using digital RNA sequencing, the expression of a focused panel of genes involved in cell death pathways 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.



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
9430015G10Rik	Abl1	Aifm1	Akt1
Ambra1	Anxa5	Apaf1	Api5
App	Atf5	Atg10	Atg101
Atg12	Atg13	Atg14	Atg1611
Atg1612	Atg2a	Atg2b	Atg3
Atg4a	Atg4b	Atg4c	Atg4d
Atg5	Atg7	Atg9a	Atg9b
Atp6v1g2	Bad	Bag1	Bag3
Bak1	Bax	Bbc3	Bcl10
Bcl2	Bcl2a1a	Bcl2a1b	Bcl2a1c
Bcl2a1d	Bcl2l1	Bcl2l10	Bcl2l11
Bcl2l2	Becn1	Bfar	Bid
Bik	Birc2	Birc3	Birc5
Birc6	Bmf	Bnip2	Bnip3
Bnip3l	Bok	Braf	Brca1
Capn1	Capn2	Capn3	Capn5
Capn6	Capn7	Capns1	Card10
Casp1	Casp12	Casp14	Casp2
Casp3	Casp4	Casp6	Casp7
Casp8	Casp8ap2	Casp9	Ccdc103
Cd27	Cd28	Cd40	Cd40lg
Cd70	Cdkn1a	Cdkn2a	Cflar
Cidea	Cideb	Cln3	Commd4
Cradd	Csf2	Ctsb	Ctsd
Ctss	Cxcr4	Cyba	Cybb
Cycs	Cyld	Dad1	Dapk1

Gene symbol	Gene symbol	Gene symbol	Gene symbol
Daxx	Ddit3	Defb1	Dennd4a
Dffa	Dffb	Diablo	Dpysl4
Dram1	Dram2	Eda2r	Eif2ak3
Eif4g1	Eif5b	Ern1	Esr1
F2	Fadd	Faf1	Fam134a
Fam134b	Fam134c	Fas	Fasl
Fbrsl1	Fem1b	Foxi1	Foxo3
Fus	Fyco1	Gaa	Gabarap
Gabarapl1	Gabarapl2	Gadd45a	Galnt5
Glud1	Glul	Grb2	Hdac1
Hdac6	Hgs	Hipk2	Hrk
Hsp90aa1	Hspa8	Hspbap1	Htt
Ifnb1	Ifng	Igf1	Igf1r
Ikkg	Il10	Il18	Il1b
Il2	Il24	Il4	Il6
Ins2	Irgm1	Jph3	Kcnip1
Lamp1	Lhx4	Lta	Ltbr
Madd	Mag	Map1lc3a	Map3k2
Map3k5	Mapk1	Mapk14	Mapk8
Mcl1	Mgea5	Moap1	Mtor
Myc	Myd88	Naip1	Naip2
Naip3	Naip5	Nfkb1	Nfkb2
Ngf	Ngfr	Ngfrap1	Nlrc4
Nlrp4c	Nlrp4e	Nme5	Nod1
Nod2	Nol3	Nox1	Nox4
Npc1	Olfrl404	Parp1	Parp2
Pidd1	Pik3c3	Pik3cg	Pik3r4
Pink1	Pmaip1	Pml	Polb
Ppid	Ppie	Ppil2	Prkaa1
Prkca	Prkcd	Pten	Pvr
Pycard	Pygl	Rab24	Rab25
Rasa1	Rb1	Rb1cc1	Rfx1
Rgs19	Ripk1	Ripk2	Ripk3
Rps6kb1	S100a7a	Sirt1	Slc25a4
Snca	Sp1	Spata2	Spn
Sqstm1	Stat1	Sycp2	Tgfb1
Tgm2	Thap3	Tmem123	Tmem57
Tmem74	Tnf	Tnfrsf10b	Tnfrsf11b
Tnfrsf14	Tnfrsf17	Tnfrsf1a	Tnfrsf1b
Tnfrsf21	Tnfrsf25	Tnfrsf4	Tnfrsf8
Tnfrsf9	Tnfsf10	Tnfsf12	Tnfsf15
Tnfsf8	Tradd	Traf1	Traf2
Traf3	Trp53	Trp53bp2	Trp63
Trp73	Txn14b	Ulk1	Ulk2

Gene symbol	Gene symbol	Gene symbol	Gene symbol
Uvr9g	Vmp1	Wipi1	Xiap
Zbtb22	Zfp446	_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.

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