

# QuantiNova® LNA® Probe PCR Focus Panels (Rotor-Gene® Format)

## Mouse Multiple Sclerosis

Cat. no. 249955 UPMM-125ZR

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light at 2–8°C for short term storage or at –30°C to –15°C for long time storage. Under these conditions, all components are stable for at least 12 months.

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

For optimal performance, QuantiNova LNA Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

### Panel layout (Rotor-Gene): QuantiNova LNA Probe PCR Focus Panel

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. Refer to the QuantiNova LNA Probe PCR Handbook at [www.qiagen.com](http://www.qiagen.com) for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Adm	Akt1s1	Apc	App	Aspa	Bax	Bcl2	Bcl2l1	C1s1	Ccl12	Ccl3	Ccl5
B	Cd7	Ccr1	Ccr5	Cd28	Cd4	Cd40	Cd44	Cd9	Csf1	Cxcl10	Cxcl11	Cxcl9
C	Cxcr3	Edc4	Ednra	Egr1	Epha1	ErbB3	Ezr	Fas1	Fn1	Foxp3	Gfap	Gnai2
D	Gpx1	Grb2	H2-Eb1	Hdac1	Hexb	Hif1a	Icam1	Ifng	Il10	Il13	Il18	Il1b
E	Il2ra	Il6	Il6st	Ilgb2	Jak1	Jak2	Jun	Lta	Mag	Mal	Map2k1	Mapk1
F	Mbp	Mmp9	Myc	NfkB1	Nr2f1	Nrf3	Phgdh	Plp1	Pmp22	Ptpn11	Raf1	Rangap1
G	Sod1	Stat3	Tgfb1	Tgfb2	Tnf	Tnfrsf1a	Tnfrsf1b	Top1	Tubb4a	Vcam1	Vegfa	Ywhah
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFM099995 4	ENSMUST00000 033054.9	Adm	ENSMUSG00 000030790	adrenomedullin Source MGI Symbol Acc MGI 108058
A02	UPFM066916 4	ENSMUST00000 107880.8	Akt1s1	ENSMUSG00 000011096	AKT1 substrate 1 (proline-rich) Source MGI Symbol Acc MGI 1914855
A03	UPFM082281 4	ENSMUST00000 163295.1	Apc	ENSMUSG00 000005871	APC, WNT signaling pathway regulator Source MGI Symbol Acc MGI 88039
A04	UPFM081516 9	ENSMUST00000 227723.1	App	ENSMUSG00 000022892	amyloid beta (A4) precursor protein Source MGI Symbol Acc MGI 88059
A05	UPFM091008 7	ENSMUST00000 134079.1	Aspa	ENSMUSG00 000020774	aspartoacylase Source MGI Symbol Acc MGI 87914
A06	UPFM090386 1	ENSMUST00000 211195.1	Bax	ENSMUSG00 000003873	BCL2-associated X protein Source MGI Symbol Acc MGI 99702
A07	UPFM063585 3	ENSMUST00000 112751.1	Bcl2	ENSMUSG00 0000057329	B cell leukemia/lymphoma 2 Source MGI Symbol Acc MGI 88138
A08	UPFM066341 1	ENSMUST00000 156688.1	Bcl2l1	ENSMUSG00 000007659	BCL2-like 1 Source MGI Symbol Acc MGI 88139
A09	UPFM062674 2	ENSMUST00000 159463.7	C1s1	ENSMUSG00 000038521	complement component 1, s subcomponent 1 Source MGI Symbol Acc MGI 1355312
A10	UPFM078189 8	ENSMUST00000 124916.1	Ccl12	ENSMUSG00 000035352	chemokine (C-C motif) ligand 12 Source MGI Symbol Acc MGI 108224
A11	UPFM100418 5	ENSMUST00000 001008.5	Ccl3	ENSMUSG00 000000982	chemokine (C-C motif) ligand 3 Source MGI Symbol Acc MGI 98260
A12	UPFM078318 2	ENSMUST00000 035938.2	Ccl5	ENSMUSG00 000035042	chemokine (C-C motif) ligand 5 Source MGI Symbol Acc MGI 98262
B01	UPFM093687 7	ENSMUST00000 021011.2	Ccl7	ENSMUSG00 000035373	chemokine (C-C motif) ligand 7 Source MGI Symbol Acc MGI 99512
B02	UPFM098127 6	ENSMUST00000 026911.5	Ccr1	ENSMUSG00 000025804	chemokine (C-C motif) receptor 1 Source MGI Symbol Acc MGI 104618
B03	UPFM078922 4	ENSMUST00000 111442.2	Ccr5	ENSMUSG00 000079227	chemokine (C-C motif) receptor 5 Source MGI Symbol Acc MGI 107182
B04	UPFM073617 9	ENSMUST00000 153207.1	Cd28	ENSMUSG00 000026012	CD28 antigen Source MGI Symbol Acc MGI 88327
B05	UPFM075548 7	ENSMUST00000 145818.1	Cd4	ENSMUSG00 000023274	CD4 antigen Source MGI Symbol Acc MGI 88335
B06	UPFM072215 7	ENSMUST00000 153105.1	Cd40	ENSMUSG00 000017652	CD40 antigen Source MGI Symbol Acc MGI 88336
B07	UPFM095220 9	ENSMUST00000 111192.2	Cd44	ENSMUSG00 000005087	CD44 antigen Source MGI Symbol Acc MGI 88338
B08	UPFM096603 0	ENSMUST00000 130132.1	Cd9	ENSMUSG00 000030342	CD9 antigen Source MGI Symbol Acc MGI 88348
B09	UPFM064393 3	ENSMUST00000 155557.1	Csf1	ENSMUSG00 000014599	colony stimulating factor 1 (macrophage) Source MGI Symbol Acc MGI 1339753
B10	UPFM098980 6	ENSMUST00000 038816.12	Cxcl10	ENSMUSG00 000034855	chemokine (C-X-C motif) ligand 10 Source MGI Symbol Acc MGI 1352450
B11	UPFM089321 1	ENSMUST00000 122808.1	Cxcl11	ENSMUSG00 000060183	chemokine (C-X-C motif) ligand 11 Source MGI Symbol Acc MGI 1860203
B12	UPFM094088 9	ENSMUST00000 202404.1	Cxcl9	ENSMUSG00 000029417	chemokine (C-X-C motif) ligand 9 Source MGI Symbol Acc MGI 1352449
C01	UPFM074415 9	ENSMUST00000 056614.6	Cxcr3	ENSMUSG00 000050232	chemokine (C-X-C motif) receptor 3 Source MGI Symbol Acc MGI 1277207
C02	UPFM063022 7	ENSMUST00000 119261.7	Edc4	ENSMUSG00 000036270	enhancer of mRNA decapping 4 Source MGI Symbol Acc MGI 2446249
C03	UPFM066650 7	ENSMUST00000 146561.1	Ednra	ENSMUSG00 000031616	endothelin receptor type A Source MGI Symbol Acc MGI 105923
C04	UPFM085434 3	ENSMUST00000 165033.1	Egr1	ENSMUSG00 000038418	early growth response 1 Source MGI Symbol Acc MGI 95295
C05	UPFM069048 5	ENSMUST00000 204238.1	Epha1	ENSMUSG00 000029859	Eph receptor A1 Source MGI Symbol Acc MGI 107381
C06	UPFM086306 1	ENSMUST00000 082059.6	ErbB3	ENSMUSG00 000018166	erb-b2 receptor tyrosine kinase 3 Source MGI Symbol Acc MGI 95411
C07	UPFM075399 9	ENSMUST00000 064234.6	Ezr	ENSMUSG00 000052397	ezrin Source MGI Symbol Acc MGI 98931
C08	UPFM074944 2	ENSMUST00000 193648.1	FasL	ENSMUSG00 000000817	Fas ligand (TNF superfamily, member 6) Source MGI Symbol Acc MGI 99255
C09	UPFM086511 0	ENSMUST00000 188894.6	Fn1	ENSMUSG00 000026193	fibronectin 1 Source MGI Symbol Acc MGI 95566
C10	UPFM072970 2	ENSMUST00000 234479.1	Foxp3	ENSMUSG00 000039521	forkhead box P3 Source MGI Symbol Acc MGI 1891436
	UPFM085676	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	1	077902.4	Gfap	000020932	glial fibrillary acidic protein Source MGI Symbol Acc MGI 95697
C12	UPFM074896 6	ENSMUST00000 192615.5	Gnai2	ENSMUSG00 000032562	guanine nucleotide binding protein (G protein), alpha inhibiting 2 Source MGI Symbol Acc MGI 95772
D01	UPFM091057 8	ENSMUST00000 193987.1	Gpx1	ENSMUSG00 000063856	glutathione peroxidase 1 Source MGI Symbol Acc MGI 104887
D02	UPFM076228 3	ENSMUST00000 135065.1	Grb2	ENSMUSG00 000059923	growth factor receptor bound protein 2 Source MGI Symbol Acc MGI 95805
D03	UPFM085115 0	ENSMUST00000 074557.10	H2-Eb1	ENSMUSG00 000060586	histocompatibility 2, class II antigen E beta Source MGI Symbol Acc MGI 95901
D04	UPFM093590 7	ENSMUST00000 125718.7	Hdac1	ENSMUSG00 000028800	histone deacetylase 1 Source MGI Symbol Acc MGI 108086
D05	UPFM067137 4	ENSMUST00000 022169.9	Hexb	ENSMUSG00 000021665	hexosaminidase B Source MGI Symbol Acc MGI 96074
D06	UPFM090240 6	ENSMUST00000 110461.7	Hif1a	ENSMUSG00 000021109	hypoxia inducible factor 1, alpha subunit Source MGI Symbol Acc MGI 106918
D07	UPFM084326 4	ENSMUST00000 215003.1	Icam1	ENSMUSG00 000037405	intercellular adhesion molecule 1 Source MGI Symbol Acc MGI 96392
D08	UPFM117295 0	ENSMUST00000 068592.4	Iifng	ENSMUSG00 000055170	interferon gamma Source MGI Symbol Acc MGI 107656
D09	UPFM117295 1	ENSMUST00000 016673.5	Il10	ENSMUSG00 000016529	interleukin 10 Source MGI Symbol Acc MGI 96537
D10	UPFM117295 2	ENSMUST00000 020650.1	Il13	ENSMUSG00 000020383	interleukin 13 Source MGI Symbol Acc MGI 96541
D11	UPFM093943 0	ENSMUST00000 180021.1	Il18	ENSMUSG00 000039217	interleukin 18 Source MGI Symbol Acc MGI 107936
D12	UPFM067128 1	ENSMUST00000 155994.1	Il1b	ENSMUSG00 000027398	interleukin 1 beta Source MGI Symbol Acc MGI 96543
E01	UPFM092234 6	ENSMUST00000 028111.5	Il2ra	ENSMUSG00 000026770	interleukin 2 receptor, alpha chain Source MGI Symbol Acc MGI 96549
E02	UPFM072909 9	ENSMUST00000 195978.4	Il6	ENSMUSG00 000025746	interleukin 6 Source MGI Symbol Acc MGI 96559
E03	UPFM100226 1	ENSMUST00000 184445.7	Il6st	ENSMUSG00 000021756	interleukin 6 signal transducer Source MGI Symbol Acc MGI 96560
E04	UPFM083841 4	ENSMUST00000 156644.7	Itgb2	ENSMUSG00 000000290	integrin beta 2 Source MGI Symbol Acc MGI 96611
E05	UPFM073443 4	ENSMUST00000 155328.7	Jak1	ENSMUSG00 000028530	Janus kinase 1 Source MGI Symbol Acc MGI 96628
E06	UPFM074831 3	ENSMUST00000 065796.9	Jak2	ENSMUSG00 000024789	Janus kinase 2 Source MGI Symbol Acc MGI 96629
E07	UPFM097521 6	ENSMUST00000 107094.1	Jun	ENSMUSG00 000052684	jun proto-oncogene Source MGI Symbol Acc MGI 96646
E08	UPFM065707 9	ENSMUST00000 025266.5	Lta	ENSMUSG00 000024402	lymphotoxin A Source MGI Symbol Acc MGI 104797
E09	UPFM084129 7	ENSMUST00000 040548.13	Mag	ENSMUSG00 000036634	myelin-associated glycoprotein Source MGI Symbol Acc MGI 96912
E10	UPFM071418 4	ENSMUST00000 028853.6	Mal	ENSMUSG00 000027375	myelin and lymphocyte protein, T cell differentiation protein Source MGI Symbol Acc MGI 892970
E11	UPFM066592 5	ENSMUST00000 005066.8	Map2k1	ENSMUSG00 000004936	mitogen-activated protein kinase kinase 1 Source MGI Symbol Acc MGI 1346866
E12	UPFM066625 9	ENSMUST00000 232611.1	Mapk1	ENSMUSG00 000063358	mitogen-activated protein kinase 1 Source MGI Symbol Acc MGI 1346858
F01	UPFM083807 9	ENSMUST00000 075372.12	Mbp	ENSMUSG00 000041607	myelin basic protein Source MGI Symbol Acc MGI 96925
F02	UPFM079930 8	ENSMUST00000 017881.2	Mmp9	ENSMUSG00 000017737	matrix metalloproteinase 9 Source MGI Symbol Acc MGI 97011
F03	UPFM081421 4	ENSMUST00000 161976.7	Myc	ENSMUSG00 000022346	myelocytomatosis oncogene Source MGI Symbol Acc MGI 97250
F04	UPFM098758 7	ENSMUST00000 029812.13	Nfkb1	ENSMUSG00 000028163	nuclear factor of kappa light polypeptide gene enhancer in B cells 1, p105 Source MGI Symbol Acc MGI 97312
F05	UPFM066253 6	ENSMUST00000 150498.7	Nr2f1	ENSMUSG00 000069171	nuclear receptor subfamily 2, group F, member 1 Source MGI Symbol Acc MGI 1352451
F06	UPFM082388 6	ENSMUST00000 112244.7	Nrf3	ENSMUSG00 000049107	neurotrophin 3 Source MGI Symbol Acc MGI 97380
F07	UPFM092136 1	ENSMUST00000 065793.11	Phgdh	ENSMUSG00 000053398	3-phosphoglycerate dehydrogenase Source MGI Symbol Acc MGI 1355330
F08	UPFM067787 5	ENSMUST00000 125644.1	Plp1	ENSMUSG00 000031425	proteolipid protein (myelin) 1 Source MGI Symbol Acc MGI 97623
F09	UPFM064630 9	ENSMUST00000 018361.9	Pmp22	ENSMUSG00 000018217	peripheral myelin protein 22 Source MGI Symbol Acc MGI 97631
F10	UPFM092286 3	ENSMUST00000 100770.8	Ptpn11	ENSMUSG00 000043733	protein tyrosine phosphatase, non-receptor type 11 Source MGI Symbol Acc MGI 99511

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM071074 7	ENSMUST00000 204512.1	Raf1	ENSMUSG00 000000441	v-raf-leukemia viral oncogene 1 Source MGI Symbol Acc MGI 97847
F12	UPFM098832 3	ENSMUST00000 230302.1	Rangap1	ENSMUSG00 000022391	RAN GTPase activating protein 1 Source MGI Symbol Acc MGI 103071
G01	UPFM092762 0	ENSMUST00000 023707.10	Sod1	ENSMUSG00 000022982	superoxide dismutase 1, soluble Source MGI Symbol Acc MGI 98351
G02	UPFM098484 5	ENSMUST00000 092671.11	Stat3	ENSMUSG00 000004040	signal transducer and activator of transcription 3 Source MGI Symbol Acc MGI 103038
G03	UPFM066688 0	ENSMUST00000 171757.1	Tgfb1	ENSMUSG00 000002603	transforming growth factor, beta 1 Source MGI Symbol Acc MGI 98725
G04	UPFM073116 6	ENSMUST00000 045288.13	Tgfb2	ENSMUSG00 000039239	transforming growth factor, beta 2 Source MGI Symbol Acc MGI 98726
G05	UPFM063847 1	ENSMUST00000 025263.14	Tnf	ENSMUSG00 000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
G06	UPFM070484 6	ENSMUST00000 144524.1	Tnfrsf1a	ENSMUSG00 000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G07	UPFM063198 6	ENSMUST00000 143055.1	Tnfrsf1b	ENSMUSG00 000028599	tumor necrosis factor receptor superfamily, member 1b Source MGI Symbol Acc MGI 1314883
G08	UPFM073077 9	ENSMUST00000 150039.1	Top1	ENSMUSG00 000070544	topoisomerase (DNA) I Source MGI Symbol Acc MGI 98788
G09	UPFM083955 2	ENSMUST00000 071135.5	Tubb4a	ENSMUSG00 000062591	tubulin, beta 4A class IVA Source MGI Symbol Acc MGI 107848
G10	UPFM083873 5	ENSMUST00000 029574.12	Vcam1	ENSMUSG00 000027962	vascular cell adhesion molecule 1 Source MGI Symbol Acc MGI 98926
G11	UPFM117296 6	ENSMUST00000 214739.1	Vegfa	ENSMUSG00 000023951	vascular endothelial growth factor A Source MGI Symbol Acc MGI 103178
G12	UPFM090562 8	ENSMUST00000 138261.1	Ywhah	ENSMUSG00 000018965	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, eta polypeptide Source MGI Symbol Acc MGI 109194
H01	UPFM113294 6	ENSMUST00000 163829.1	Actb	ENSMUSG00 000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	UPFM113294 7	ENSMUST00000 102476.4	B2m	ENSMUSG00 000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	UPFM113294 8	ENSMUST00000 117757.8	Gapdh	ENSMUSG00 000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	UPFM113294 9	ENSMUST00000 026613.13	Gusb	ENSMUSG00 000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	UPFM113295 0	ENSMUST00000 166469.7	Hsp90ab1	ENSMUSG00 000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	UPFM112660 9	UPL_MGDC	MGDC	UPL_MGDC	Mouse Genomic DNA Contamination
H07	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H08	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H09	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H10	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H11	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H12	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA Probe PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249945
QuantiNova Reverse Transcription Kit (10)*	For 10 x 20 $\mu$ l reactions: 20 $\mu$ l 8x gDNA Removal Mix, 10 $\mu$ l Reverse Transcription Enzyme, 40 $\mu$ l Reverse Transcription Mix (containing RT primers), 20 $\mu$ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova Probe RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 $\mu$ l QuantiNova Probe RT Mix, 20 $\mu$ l Internal Control RNA, 500 $\mu$ l Yellow Template Dilution Buffer, 250 $\mu$ l ROX Reference Dye, 1.9 $\mu$ l RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208252

\*Larger kit sizes available.

The QuantiNova LNA Probe PCR Focus 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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