

# QuantiNova® LNA® Probe PCR Focus Panels (96-Well Format and 384-Well [4 x 96] Format)

## Mouse Insulin Resistance

Cat. no. 249955 UPMM-156ZA

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 (96-well): QuantiNova LNA Probe PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. 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	Acaca	Acacb	Acs1l	Acs14	Adipoq	Adipor1	Adipor2	Akt3	Alox5	Apoe	Casp1	Ccl12
B	Ccr4	Ccr5	Ccr6	Cd36	Cd3e	Cebpa	Chuk	Cnbp	Crtf2	Cs	Cxcr3	Cxcr4
C	Adgre1	Fabp4	Fasn	Gys1	Hk2	Ifng	Igf1	Igf1r	Ikbb	Il18r1	Il1b	Il1r1
D	Il23r	Il6	Insr	Irs1	Irs2	Jak2	Lep	Lepr	Lipe	Lpl	Lta4h	Map2k1
E	Mapk3	Mapk9	Mtor	Nampt	Nfkbia	Nlrp3	Olr1	Pck1	Pde3b	Pdk2	Pdx1	Pik3ca
F	Pik3r1	Ppara	Pparg	Ppargc1a	Ptpn1	Pycard	Rbp4	Rela	Retn	Rps6kb1	Scd1	Serpine1
G	Slc27a1	Slc2a4	Socs3	Srebf1	Srebf2	Stat3	Tlr4	Tnf	Tnfrsf1a	Tnfrsf1b	Ucp1	Vldlr
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	UPFM094854 9	ENSMUST00000 130012.8	Acaca	ENSMUSG00 000020532	acetyl-Coenzyme A carboxylase alpha Source MGI Symbol Acc MGI 108451
A02	UPFM077803 6	ENSMUST00000 143276.1	Acacb	ENSMUSG00 000042010	acetyl-Coenzyme A carboxylase beta Source MGI Symbol Acc MGI 2140940
A03	UPFM092757 2	ENSMUST00000 152423.1	Acs1	ENSMUSG00 000018796	acyl-CoA synthetase long-chain family member 1 Source MGI Symbol Acc MGI 102797
A04	UPFM092898 6	ENSMUST00000 112904.7	Acs14	ENSMUSG00 000031278	acyl-CoA synthetase long-chain family member 4 Source MGI Symbol Acc MGI 1354713
A05	UPFM096756 9	ENSMUST00000 023593.5	Adipoq	ENSMUSG00 000022878	adiponectin, C1Q and collagen domain containing Source MGI Symbol Acc MGI 106675
A06	UPFM075897 6	ENSMUST00000 148822.1	Adipor1	ENSMUSG00 000026457	adiponectin receptor 1 Source MGI Symbol Acc MGI 1919924
A07	UPFM089965 7	ENSMUST00000 169744.7	Adipor2	ENSMUSG00 000030168	adiponectin receptor 2 Source MGI Symbol Acc MGI 93830
A08	UPFM085236 9	ENSMUST00000 111160.8	Akt3	ENSMUSG00 000019699	thymoma viral proto-oncogene 3 Source MGI Symbol Acc MGI 1345147
A09	UPFM067709 5	ENSMUST00000 164547.7	Alox5	ENSMUSG00 000025701	arachidonate 5-lipoxygenase Source MGI Symbol Acc MGI 87999
A10	UPFM092642 1	ENSMUST00000 172808.1	ApoE	ENSMUSG00 000002985	apolipoprotein E Source MGI Symbol Acc MGI 88057
A11	UPFM095374 8	ENSMUST00000 027015.5	Casp1	ENSMUSG00 000025888	caspase 1 Source MGI Symbol Acc MGI 96544
A12	UPFM078189 8	ENSMUST00000 124916.1	Ccl12	ENSMUSG00 000035352	chemokine (C-C motif) ligand 12 Source MGI Symbol Acc MGI 108224
B01	UPFM092149 8	ENSMUST00000 054414.4	Ccr4	ENSMUSG00 000047898	chemokine (C-C motif) receptor 4 Source MGI Symbol Acc MGI 107824
B02	UPFM078922 4	ENSMUST00000 111442.2	Ccr5	ENSMUSG00 000079227	chemokine (C-C motif) receptor 5 Source MGI Symbol Acc MGI 107182
B03	UPFM089684 0	ENSMUST00000 231340.1	Ccr6	ENSMUSG00 000040899	chemokine (C-C motif) receptor 6 Source MGI Symbol Acc MGI 1333797
B04	UPFM083550 8	ENSMUST00000 170051.7	Cd36	ENSMUSG00 000002944	CD36 molecule Source MGI Symbol Acc MGI 107899
B05	UPFM082079 4	ENSMUST00000 214582.1	Cd3e	ENSMUSG00 000032093	CD3 antigen, epsilon polypeptide Source MGI Symbol Acc MGI 88332
B06	UPFM099260 7	ENSMUST00000 042985.10	Cebpa	ENSMUSG00 000034957	CCAAT/enhancer binding protein (C/EBP), alpha Source MGI Symbol Acc MGI 99480
B07	UPFM100719 5	ENSMUST00000 146861.1	Chuk	ENSMUSG00 000025199	conserved helix-loop-helix ubiquitous kinase Source MGI Symbol Acc MGI 99484
B08	UPFM070943 0	ENSMUST00000 113619.7	Cnbp	ENSMUSG00 000030057	cellular nucleic acid binding protein Source MGI Symbol Acc MGI 88431
B09	UPFM067588 3	ENSMUST00000 200284.4	Crrf2	ENSMUSG00 000033467	cytokine receptor-like factor 2 Source MGI Symbol Acc MGI 1889506
B10	UPFM067430 5	ENSMUST00000 005826.8	Cs	ENSMUSG00 000005683	citrate synthase Source MGI Symbol Acc MGI 88529
B11	UPFM074415 9	ENSMUST00000 056614.6	Cxcr3	ENSMUSG00 000050232	chemokine (C-X-C motif) receptor 3 Source MGI Symbol Acc MGI 1277207
B12	UPFM077457 5	ENSMUST00000 052172.6	Cxcr4	ENSMUSG00 000045382	chemokine (C-X-C motif) receptor 4 Source MGI Symbol Acc MGI 109563
C01	UPFM063865 1	ENSMUST00000 004850.7	Adgre1	ENSMUSG00 000004730	adhesion G protein-coupled receptor E1 Source MGI Symbol Acc MGI 106912
C02	UPFM075438 9	ENSMUST00000 029041.5	Fabp4	ENSMUSG00 000062515	fatty acid binding protein 4, adipocyte Source MGI Symbol Acc MGI 88038
C03	UPFM081265 2	ENSMUST00000 055655.8	Fasn	ENSMUSG00 000025153	fatty acid synthase Source MGI Symbol Acc MGI 95485
C04	UPFM065517 4	ENSMUST00000 003964.16	Gys1	ENSMUSG00 000003865	glycogen synthase 1, muscle Source MGI Symbol Acc MGI 101805
C05	UPFM074256 7	ENSMUST00000 000642.10	Hk2	ENSMUSG00 000000628	hexokinase 2 Source MGI Symbol Acc MGI 1315197
C06	UPFM117295 0	ENSMUST00000 068592.4	Ifng	ENSMUSG00 000055170	interferon gamma Source MGI Symbol Acc MGI 107656
C07	UPFM092941 8	ENSMUST00000 121161.7	Igf1	ENSMUSG00 000020053	insulin-like growth factor 1 Source MGI Symbol Acc MGI 96432
C08	UPFM065329 9	ENSMUST00000 208871.1	Igf1r	ENSMUSG00 000005533	insulin-like growth factor I receptor Source MGI Symbol Acc MGI 96433
C09	UPFM086154 1	ENSMUST00000 146212.7	Ikbbp	ENSMUSG00 000031537	inhibitor of kappaB kinase beta Source MGI Symbol Acc MGI 1338071
C10	UPFM089350 1	ENSMUST00000 193793.5	Il18r1	ENSMUSG00 000026070	interleukin 18 receptor 1 Source MGI Symbol Acc MGI 105383
	UPFM067128	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	1	155994.1	Il1b	000027398	interleukin 1 beta Source MGI Symbol Acc MGI 96543
C12	UPFM070319 9	ENSMUST00000 114795.2	Il1r1	ENSMUSG00 000026072	interleukin 1 receptor, type I Source MGI Symbol Acc MGI 96545
D01	UPFM062338 2	ENSMUST00000 118364.1	Il23r	ENSMUSG00 000049093	interleukin 23 receptor Source MGI Symbol Acc MGI 2181693
D02	UPFM072909 9	ENSMUST00000 195978.4	Il6	ENSMUSG00 000025746	interleukin 6 Source MGI Symbol Acc MGI 96559
D03	UPFM062502 4	ENSMUST00000 207100.1	Insr	ENSMUSG00 000005534	insulin receptor Source MGI Symbol Acc MGI 96575
D04	UPFM068140 3	ENSMUST00000 069799.2	Irs1	ENSMUSG00 000055980	insulin receptor substrate 1 Source MGI Symbol Acc MGI 99454
D05	UPFM078114 6	ENSMUST00000 040514.7	Irs2	ENSMUSG00 000038894	insulin receptor substrate 2 Source MGI Symbol Acc MGI 109334
D06	UPFM074831 3	ENSMUST00000 065796.9	Jak2	ENSMUSG00 000024789	Janus kinase 2 Source MGI Symbol Acc MGI 96629
D07	UPFM068614 7	ENSMUST00000 169505.1	Lep	ENSMUSG00 000059201	leptin Source MGI Symbol Acc MGI 104663
D08	UPFM097537 4	ENSMUST00000 128948.7	LepR	ENSMUSG00 000057722	leptin receptor Source MGI Symbol Acc MGI 104993
D09	UPFM099108 5	ENSMUST00000 206861.1	Lipe	ENSMUSG00 000003123	lipase, hormone sensitive Source MGI Symbol Acc MGI 96790
D10	UPFM082678 7	ENSMUST00000 169749.1	Lpl	ENSMUSG00 000015568	lipoprotein lipase Source MGI Symbol Acc MGI 96820
D11	UPFM062843 6	ENSMUST00000 216146.1	Lta4h	ENSMUSG00 000015889	leukotriene A4 hydrolase Source MGI Symbol Acc MGI 96836
D12	UPFM066592 5	ENSMUST00000 005066.8	Map2k1	ENSMUSG00 000004936	mitogen-activated protein kinase kinase 1 Source MGI Symbol Acc MGI 1346866
E01	UPFM094029 9	ENSMUST00000 205657.1	Mapk3	ENSMUSG00 000063065	mitogen-activated protein kinase 3 Source MGI Symbol Acc MGI 1346859
E02	UPFM094782 8	ENSMUST00000 144857.7	Mapk9	ENSMUSG00 000020366	mitogen-activated protein kinase 9 Source MGI Symbol Acc MGI 1346862
E03	UPFM062102 3	ENSMUST00000 057580.7	Mtor	ENSMUSG00 000028991	mechanistic target of rapamycin kinase Source MGI Symbol Acc MGI 1928394
E04	UPFM073692 2	ENSMUST00000 220200.1	Nampt	ENSMUSG00 000020572	nicotinamide phosphoribosyltransferase Source MGI Symbol Acc MGI 1929865
E05	UPFM072174 5	ENSMUST00000 021413.8	Nfkb1a	ENSMUSG00 000021025	nuclear factor of kappa light polypeptide gene enhancer in B cells inhibitor, alpha Source MGI Symbol Acc MGI 104741
E06	UPFM077169 7	ENSMUST00000 149126.1	Nlrp3	ENSMUSG00 000032691	NLR family, pyrin domain containing 3 Source MGI Symbol Acc MGI 2653833
E07	UPFM096086 8	ENSMUST00000 183258.7	Olr1	ENSMUSG00 000030162	oxidized low density lipoprotein (lectin-like) receptor 1 Source MGI Symbol Acc MGI 1261434
E08	UPFM090146 6	ENSMUST00000 150629.7	Pck1	ENSMUSG00 000027513	phosphoenolpyruvate carboxykinase 1, cytosolic Source MGI Symbol Acc MGI 97501
E09	UPFM085178 0	ENSMUST00000 032909.8	Pde3b	ENSMUSG00 000030671	phosphodiesterase 3B, cGMP-inhibited Source MGI Symbol Acc MGI 1333863
E10	UPFM081696 8	ENSMUST00000 126730.1	Pdk2	ENSMUSG00 000038967	pyruvate dehydrogenase kinase, isoenzyme 2 Source MGI Symbol Acc MGI 1343087
E11	UPFM078010 9	ENSMUST00000 085591.6	Pdx1	ENSMUSG00 000029644	pancreatic and duodenal homeobox 1 Source MGI Symbol Acc MGI 102851
E12	UPFM070843 8	ENSMUST00000 108243.7	Pik3ca	ENSMUSG00 000027665	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source MGI Symbol Acc MGI 1206581
F01	UPFM073586 5	ENSMUST00000 185795.1	Pik3r1	ENSMUSG00 000041417	phosphoinositide-3-kinase regulatory subunit 1 Source MGI Symbol Acc MGI 97583
F02	UPFM096943 9	ENSMUST00000 138813.7	Ppara	ENSMUSG00 000022383	peroxisome proliferator activated receptor alpha Source MGI Symbol Acc MGI 104740
F03	UPFM084296 6	ENSMUST00000 203732.2	Pparg	ENSMUSG00 000000440	peroxisome proliferator activated receptor gamma Source MGI Symbol Acc MGI 97747
F04	UPFM095044 2	ENSMUST00000 031059.13	Ppargc1a	ENSMUSG00 000029167	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha Source MGI Symbol Acc MGI 1342774
F05	UPFM096458 5	ENSMUST00000 147210.7	Pttn1	ENSMUSG00 000027540	protein tyrosine phosphatase, non-receptor type 1 Source MGI Symbol Acc MGI 97805
F06	UPFM084237 4	ENSMUST00000 033056.4	Pycard	ENSMUSG00 000030793	PYD and CARD domain containing Source MGI Symbol Acc MGI 1931465
F07	UPFM098879 1	ENSMUST00000 112335.3	Rbp4	ENSMUSG00 000024990	retinol binding protein 4, plasma Source MGI Symbol Acc MGI 97879
F08	UPFM081915 5	ENSMUST00000 025867.5	Rela	ENSMUSG00 000024927	v-rel reticuloendotheliosis viral oncogene homolog A (avian) Source MGI Symbol Acc MGI 103290
F09	UPFM080373 5	ENSMUST00000 012849.14	Retn	ENSMUSG00 000012705	resistin Source MGI Symbol Acc MGI 1888506
F10	UPFM063338 0	ENSMUST00000 020824.14	Rps6kb1	ENSMUSG00 000020516	ribosomal protein S6 kinase, polypeptide 1 Source MGI Symbol Acc MGI 1270849

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM064289 0	ENSMUST00000 236824.1	Scd1	ENSMUSG00 000037071	stearoyl-Coenzyme A desaturase 1 Source MGI Symbol Acc MGI 98239
F12	UPFM070788 6	ENSMUST00000 041388.10	Serpine1	ENSMUSG00 000037411	serine (or cysteine) peptidase inhibitor, clade E, member 1 Source MGI Symbol Acc MGI 97608
G01	UPFM084460 3	ENSMUST00000 212211.1	Slc27a1	ENSMUSG00 000031808	solute carrier family 27 (fatty acid transporter), member 1 Source MGI Symbol Acc MGI 1347098
G02	UPFM070742 3	ENSMUST00000 018710.12	Slc2a4	ENSMUSG00 000018566	solute carrier family 2 (facilitated glucose transporter), member 4 Source MGI Symbol Acc MGI 95758
G03	UPFM069413 9	ENSMUST00000 054002.3	Socs3	ENSMUSG00 000053113	suppressor of cytokine signaling 3 Source MGI Symbol Acc MGI 1201791
G04	UPFM063110 3	ENSMUST00000 149238.1	Srebf1	ENSMUSG00 000020538	sterol regulatory element binding transcription factor 1 Source MGI Symbol Acc MGI 107606
G05	UPFM072892 4	ENSMUST00000 230955.1	Srebf2	ENSMUSG00 000022463	sterol regulatory element binding factor 2 Source MGI Symbol Acc MGI 107585
G06	UPFM098484 5	ENSMUST00000 092671.11	Stat3	ENSMUSG00 000004040	signal transducer and activator of transcription 3 Source MGI Symbol Acc MGI 103038
G07	UPFM075034 5	ENSMUST00000 107365.2	Tlr4	ENSMUSG00 000039005	toll-like receptor 4 Source MGI Symbol Acc MGI 96824
G08	UPFM063847 1	ENSMUST00000 025263.14	Tnf	ENSMUSG00 000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
G09	UPFM070484 6	ENSMUST00000 144524.1	Tnfrsf1a	ENSMUSG00 000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G10	UPFM063198 6	ENSMUST00000 143055.1	Tnfrsf1b	ENSMUSG00 000028599	tumor necrosis factor receptor superfamily, member 1b Source MGI Symbol Acc MGI 1314883
G11	UPFM095120 9	ENSMUST00000 034146.4	Ucp1	ENSMUSG00 000031710	uncoupling protein 1 (mitochondrial, proton carrier) Source MGI Symbol Acc MGI 98894
G12	UPFM088486 6	ENSMUST00000 164746.7	Vldlr	ENSMUSG00 000024924	very low density lipoprotein receptor Source MGI Symbol Acc MGI 98935
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.

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](http://www.qiagen.com) or can be requested from QIAGEN Technical Services or your local distributor.

Trademarks: QIAGEN®, LNA®, QuantiNova®, Sample to Insight® (QIAGEN Group); SYBR® (Life Technologies Corp.). Registered names, trademarks, etc. used in this document, even when not specifically marked as such, are not to be considered unprotected by law.

09/2019 © 2019 QIAGEN, all rights reserved.