

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

## Mouse Insulin Resistance

Cat. no. 249950 SBMM-156ZA

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA PCR Focus Panels are shipped at ambient temperature. Immediately upon receipt, they should be stored 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 PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova SYBR® Green PCR Kit (Mastermix) for PCR.

### Panel layout (96-well): QuantiNova LNA PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA PCR System 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	Acs1	Acs14	Adipoq	Adipor1	Adipor2	Akt3	Alox5	Apoe	Casp1	Ccl12
B	Ccr4	Ccr5	Ccr6	Cd36	Cd3e	Cebpa	Chuk	Cnbp	Crif2	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	Plk3ca
F	Plk3r1	Ppara	Pparg	Ppargc1a	Ptpn1	Pycond	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 PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBM0933576	ENSMUST00000133811.2	Acaca	ENSMUSG0000020532	acetyl-Coenzyme A carboxylase alpha Source MGI Symbol Acc MGI 108451
A02	SBM0840405	ENSMUST00000031583.14	Acacb	ENSMUSG0000042010	acetyl-Coenzyme A carboxylase beta Source MGI Symbol Acc MGI 2140940
A03	SBM0793742	ENSMUST00000211644.1	Acs1	ENSMUSG0000018796	acyl-CoA synthetase long-chain family member 1 Source MGI Symbol Acc MGI 102797
A04	SBM0931597	ENSMUST00000033634.4	Acs14	ENSMUSG0000031278	acyl-CoA synthetase long-chain family member 4 Source MGI Symbol Acc MGI 1354713
A05	SBM0903115	ENSMUST0000023593.5	Adipoq	ENSMUSG0000022878	adiponectin, C1Q and collagen domain containing Source MGI Symbol Acc MGI 106675
A06	SBM1015976	ENSMUST00000112237.1	Adipor1	ENSMUSG0000026457	adiponectin receptor 1 Source MGI Symbol Acc MGI 1919924
A07	SBM0848941	ENSMUST00000187699.6	Adipor2	ENSMUSG0000030168	adiponectin receptor 2 Source MGI Symbol Acc MGI 93830
A08	SBM0683049	ENSMUST0000019843.14	Akt3	ENSMUSG0000019699	thymoma viral proto-oncogene 3 Source MGI Symbol Acc MGI 1345147
A09	SBM0830704	ENSMUST0000026795.12	Alox5	ENSMUSG0000025701	arachidonate 5-lipoxygenase Source MGI Symbol Acc MGI 87999
A10	SBM0912771	ENSMUST00000173739.7	ApoE	ENSMUSG0000002985	apolipoprotein E Source MGI Symbol Acc MGI 88057
A11	SBM0862549	ENSMUST0000027015.5	Casp1	ENSMUSG0000025888	caspase 1 Source MGI Symbol Acc MGI 96544
A12	SBM0687223	ENSMUST0000000194.3	Ccl12	ENSMUSG0000035352	chemokine (C-C motif) ligand 12 Source MGI Symbol Acc MGI 108224
B01	SBM0824531	ENSMUST00000054414.4	Ccr4	ENSMUSG0000047898	chemokine (C-C motif) receptor 4 Source MGI Symbol Acc MGI 107824
B02	SBM0964476	ENSMUST00000111442.2	Ccr5	ENSMUSG0000079227	chemokine (C-C motif) receptor 5 Source MGI Symbol Acc MGI 107182
B03	SBM0879668	ENSMUST00000164411.9	Ccr6	ENSMUSG0000040899	chemokine (C-C motif) receptor 6 Source MGI Symbol Acc MGI 1333797
B04	SBM0818786	ENSMUST00000170051.7	Cd36	ENSMUSG0000002944	CD36 molecule Source MGI Symbol Acc MGI 107899
B05	SBM0819334	ENSMUST00000214582.1	Cd3e	ENSMUSG0000032093	CD3 antigen, epsilon polypeptide Source MGI Symbol Acc MGI 88332
B06	SBM0970317	ENSMUST00000205391.1	Cebpa	ENSMUSG0000034957	CCAAT/enhancer binding protein (C/EBP), alpha Source MGI Symbol Acc MGI 99480
B07	SBM1034080	ENSMUST0000026217.10	Chuk	ENSMUSG0000025199	conserved helix-loop-helix ubiquitous kinase Source MGI Symbol Acc MGI 99484
B08	SBM1074339	ENSMUST00000032138.14	Cnbp	ENSMUSG0000030057	cellular nucleic acid binding protein Source MGI Symbol Acc MGI 88431
B09	SBM0959784	ENSMUST00000198960.1	Crrf2	ENSMUSG0000033467	cytokine receptor-like factor 2 Source MGI Symbol Acc MGI 1889506
B10	SBM0906169	ENSMUST00000005826.8	Cs	ENSMUSG0000005683	citrate synthase Source MGI Symbol Acc MGI 88529
B11	SBM0682187	ENSMUST00000056614.6	Cxcr3	ENSMUSG0000050232	chemokine (C-X-C motif) receptor 3 Source MGI Symbol Acc MGI 1277207
B12	SBM0923037	ENSMUST00000052172.6	Cxcr4	ENSMUSG0000045382	chemokine (C-X-C motif) receptor 4 Source MGI Symbol Acc MGI 109563
C01	SBM0988393	ENSMUST00000086763.12	Adgre1	ENSMUSG0000004730	adhesion G protein-coupled receptor E1 Source MGI Symbol Acc MGI 106912
C02	SBM0719045	ENSMUST00000029041.5	Fabp4	ENSMUSG0000062515	fatty acid binding protein 4, adipocyte Source MGI Symbol Acc MGI 88038
C03	SBM1047932	ENSMUST00000206589.1	Fasn	ENSMUSG0000025153	fatty acid synthase Source MGI Symbol Acc MGI 95485
C04	SBM0942563	ENSMUST00000003964.16	Gys1	ENSMUSG0000003865	glycogen synthase 1, muscle Source MGI Symbol Acc MGI 101805
C05	SBM1068583	ENSMUST0000000642.10	Hk2	ENSMUSG0000000628	hexokinase 2 Source MGI Symbol Acc MGI 1315197
C06	SBM0903694	ENSMUST00000068592.4	Ifng	ENSMUSG0000055170	interferon gamma Source MGI Symbol Acc MGI 107656
C07	SBM1026650	ENSMUST00000122386.7	Igf1	ENSMUSG0000020053	insulin-like growth factor 1 Source MGI Symbol Acc MGI 96432
C08	SBM0769269	ENSMUST00000207621.1	Igf1r	ENSMUSG0000005533	insulin-like growth factor I receptor Source MGI Symbol Acc MGI 96433
C09	SBM0683235	ENSMUST00000144583.7	Ikbbp	ENSMUSG0000031537	inhibitor of kappaB kinase beta Source MGI Symbol Acc MGI 1338071
C10	SBM0709309	ENSMUST00000167723.7	Il18r1	ENSMUSG0000026070	interleukin 18 receptor 1 Source MGI Symbol Acc MGI 105383
		ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0738485	028881.13	Il1b	000027398	interleukin 1 beta Source MGI Symbol Acc MGI 96543
C12	SBM1086348	ENSMUST00000 027241.10	Il1r1	ENSMUSG00 000026072	interleukin 1 receptor, type I Source MGI Symbol Acc MGI 96545
D01	SBM0693815	ENSMUST00000 118364.1	Il23r	ENSMUSG00 000049093	interleukin 23 receptor Source MGI Symbol Acc MGI 2181693
D02	SBM0742623	ENSMUST00000 026845.11	Il6	ENSMUSG00 000025746	interleukin 6 Source MGI Symbol Acc MGI 96559
D03	SBM1013137	ENSMUST00000 207100.1	Insr	ENSMUSG00 000005534	insulin receptor Source MGI Symbol Acc MGI 96575
D04	SBM0923271	ENSMUST00000 069799.2	Irs1	ENSMUSG00 000055980	insulin receptor substrate 1 Source MGI Symbol Acc MGI 99454
D05	SBM0792647	ENSMUST00000 040514.7	Irs2	ENSMUSG00 000038894	insulin receptor substrate 2 Source MGI Symbol Acc MGI 109334
D06	SBM0844988	ENSMUST00000 065796.9	Jak2	ENSMUSG00 000024789	Janus kinase 2 Source MGI Symbol Acc MGI 96629
D07	SBM0718370	ENSMUST00000 169505.1	Lep	ENSMUSG00 000059201	leptin Source MGI Symbol Acc MGI 104663
D08	SBM1058375	ENSMUST00000 128948.7	LepR	ENSMUSG00 000057722	leptin receptor Source MGI Symbol Acc MGI 104993
D09	SBM1009382	ENSMUST00000 003207.10	Lipe	ENSMUSG00 000003123	lipase, hormone sensitive Source MGI Symbol Acc MGI 96790
D10	SBM1060657	ENSMUST00000 015712.14	Lpl	ENSMUSG00 000015568	lipoprotein lipase Source MGI Symbol Acc MGI 96820
D11	SBM0938378	ENSMUST00000 016033.8	Lta4h	ENSMUSG00 000015889	leukotriene A4 hydrolase Source MGI Symbol Acc MGI 96836
D12	SBM1025120	ENSMUST00000 005066.8	Map2k1	ENSMUSG00 000004936	mitogen-activated protein kinase kinase 1 Source MGI Symbol Acc MGI 1346866
E01	SBM0856900	ENSMUST00000 206272.1	Mapk3	ENSMUSG00 000063065	mitogen-activated protein kinase 3 Source MGI Symbol Acc MGI 1346859
E02	SBM1025510	ENSMUST00000 144857.7	Mapk9	ENSMUSG00 000020366	mitogen-activated protein kinase 9 Source MGI Symbol Acc MGI 1346862
E03	SBM1220565	ENSMUST00000 103221.9	Mtor	ENSMUSG00 000028991	mechanistic target of rapamycin kinase Source MGI Symbol Acc MGI 1928394
E04	SBM0859199	ENSMUST00000 218491.1	Nampt	ENSMUSG00 000020572	nicotinamide phosphoribosyltransferase Source MGI Symbol Acc MGI 1929865
E05	SBM0696431	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	SBM0804985	ENSMUST00000 149126.1	Nlrp3	ENSMUSG00 000032691	NLR family, pyrin domain containing 3 Source MGI Symbol Acc MGI 2653833
E07	SBM1042162	ENSMUST00000 183258.7	Olr1	ENSMUSG00 000030162	oxidized low density lipoprotein (lectin-like) receptor 1 Source MGI Symbol Acc MGI 1261434
E08	SBM0953267	ENSMUST00000 029017.5	Pck1	ENSMUSG00 000027513	phosphoenolpyruvate carboxykinase 1, cytosolic Source MGI Symbol Acc MGI 97501
E09	SBM1076925	ENSMUST00000 149455.1	Pde3b	ENSMUSG00 000030671	phosphodiesterase 3B, cGMP-inhibited Source MGI Symbol Acc MGI 1333863
E10	SBM0921992	ENSMUST00000 141712.7	Pdk2	ENSMUSG00 000038967	pyruvate dehydrogenase kinase, isoenzyme 2 Source MGI Symbol Acc MGI 1343087
E11	SBM0814253	ENSMUST00000 085591.6	Pdx1	ENSMUSG00 000029644	pancreatic and duodenal homeobox 1 Source MGI Symbol Acc MGI 102851
E12	SBM0905151	ENSMUST00000 108243.7	Pik3ca	ENSMUSG00 000027665	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source MGI Symbol Acc MGI 1206581
F01	SBM0805909	ENSMUST00000 035532.12	Pik3r1	ENSMUSG00 000041417	phosphoinositide-3-kinase regulatory subunit 1 Source MGI Symbol Acc MGI 97583
F02	SBM0952484	ENSMUST00000 138813.7	Ppara	ENSMUSG00 000022383	peroxisome proliferator activated receptor alpha Source MGI Symbol Acc MGI 104740
F03	SBM1015614	ENSMUST00000 205213.2	Pparg	ENSMUSG00 000000440	peroxisome proliferator activated receptor gamma Source MGI Symbol Acc MGI 97747
F04	SBM0984439	ENSMUST00000 132734.7	Ppargc1a	ENSMUSG00 000029167	peroxisome proliferative activated receptor, gamma, coactivator 1 alpha Source MGI Symbol Acc MGI 1342774
F05	SBM0939941	ENSMUST00000 142717.1	Pttn1	ENSMUSG00 000027540	protein tyrosine phosphatase, non-receptor type 1 Source MGI Symbol Acc MGI 97805
F06	SBM0791013	ENSMUST00000 205594.1	Pycard	ENSMUSG00 000030793	PYD and CARD domain containing Source MGI Symbol Acc MGI 1931465
F07	SBM0806680	ENSMUST00000 025951.13	Rbp4	ENSMUSG00 000024990	retinol binding protein 4, plasma Source MGI Symbol Acc MGI 97879
F08	SBM0937498	ENSMUST00000 237361.1	Rela	ENSMUSG00 000024927	v-rel reticuloendotheliosis viral oncogene homolog A (avian) Source MGI Symbol Acc MGI 103290
F09	SBM0984170	ENSMUST00000 012849.14	Retn	ENSMUSG00 000012705	resistin Source MGI Symbol Acc MGI 1888506
F10	SBM0853475	ENSMUST00000 058286.8	Rps6kb1	ENSMUSG00 000020516	ribosomal protein S6 kinase, polypeptide 1 Source MGI Symbol Acc MGI 1270849

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0890897	ENSMUST00000236824.1	Scd1	ENSMUSG0000037071	stearoyl-Coenzyme A desaturase 1 Source MGI Symbol Acc MGI 98239
F12	SBM0809699	ENSMUST00000041388.10	Serpine1	ENSMUSG0000037411	serine (or cysteine) peptidase inhibitor, clade E, member 1 Source MGI Symbol Acc MGI 97608
G01	SBM0883649	ENSMUST00000034267.4	Slc27a1	ENSMUSG0000031808	solute carrier family 27 (fatty acid transporter), member 1 Source MGI Symbol Acc MGI 1347098
G02	SBM0717464	ENSMUST00000178809.7	Slc2a4	ENSMUSG0000018566	solute carrier family 2 (facilitated glucose transporter), member 4 Source MGI Symbol Acc MGI 95758
G03	SBM0977814	ENSMUST00000054002.3	Socs3	ENSMUSG0000053113	suppressor of cytokine signaling 3 Source MGI Symbol Acc MGI 1201791
G04	SBM0984070	ENSMUST00000020846.7	Srebf1	ENSMUSG0000020538	sterol regulatory element binding transcription factor 1 Source MGI Symbol Acc MGI 107606
G05	SBM0762835	ENSMUST00000229336.1	Srebf2	ENSMUSG0000022463	sterol regulatory element binding factor 2 Source MGI Symbol Acc MGI 107585
G06	SBM0821931	ENSMUST00000103114.7	Stat3	ENSMUSG0000004040	signal transducer and activator of transcription 3 Source MGI Symbol Acc MGI 103038
G07	SBM0745293	ENSMUST00000107365.2	Tlr4	ENSMUSG0000039005	toll-like receptor 4 Source MGI Symbol Acc MGI 96824
G08	SBM0788439	ENSMUST00000025263.14	Tnf	ENSMUSG0000024401	tumor necrosis factor Source MGI Symbol Acc MGI 104798
G09	SBM0837100	ENSMUST00000134803.1	Tnfrsf1a	ENSMUSG0000030341	tumor necrosis factor receptor superfamily, member 1a Source MGI Symbol Acc MGI 1314884
G10	SBM0979488	ENSMUST00000143055.1	Tnfrsf1b	ENSMUSG0000028599	tumor necrosis factor receptor superfamily, member 1b Source MGI Symbol Acc MGI 1314883
G11	SBM1037476	ENSMUST00000034146.4	Ucp1	ENSMUSG0000031710	uncoupling protein 1 (mitochondrial, proton carrier) Source MGI Symbol Acc MGI 98894
G12	SBM0933550	ENSMUST00000047645.12	Vldlr	ENSMUSG0000024924	very low density lipoprotein receptor Source MGI Symbol Acc MGI 98935
H01	SBM1220560	ENSMUST00000100497.10	Actb	ENSMUSG0000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST00000102476.4	B2m	ENSMUSG0000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST00000117757.8	Gapdh	ENSMUSG0000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST00000026613.13	Gusb	ENSMUSG0000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG0000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	SBM1218554	Sybr_MGDC	MGDC	Sybr_MGDC	Mouse Genomic DNA Contamination
H07	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H08	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H09	SBH1218551	Sybr_QIC	QIC	Sybr_QIC	QuantiNova Internal Control
H10	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H11	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control
H12	SBH1218550	Sybr_PPC	PPC	Sybr_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249940
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 SYBR Green RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 $\mu$ l QuantiNova SYBR Green 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	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208052

\*Larger kit sizes available.

The QuantiNova LNA 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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