

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

## Mouse Lipoprotein Signaling & Cholesterol Metabolism

Cat. no. 249950 SBMM-080ZA

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	Abca1	Abca2	Abcg1	Acaa2	Akr1d1	Angptl3	Ankra2	Apoa1	Apoa2	Apoa4	Apob	Apoc3
B	Apod	Apoe	Apof	Apol8	Cdh13	Cel	Cela3b	Cnbp	Colec12	Crp	Cxcl16	Cyb5r3
C	Cyp11a1	Cyp39a1	Cyp46a1	Cyp51	Cyp7a1	Cyp7b1	Dhcr24	Dhcr7	Ebp	Fdft1	Fdps	Hdlbp
D	Hmgcr	Hmgcs1	Hmgcs2	Idi1	Idi2	Il4	Insig1	Insig2	Lcat	Ldlr	Ldlrap1	Lep
E	Lipe	Lrp10	Lrp12	Lrp1b	Lrp6	Lrpap1	Mbtps1	Mvd	Mvk	Npc111	Nr0b2	Nr1h4
F	Nadh1	Olr1	Osbpl1a	Osbpl5	Pcsk9	Pmk	Ppard	Prkaa1	Prkaa2	Prkag2	Scap	Scarf1
G	Srx17	Soat1	Soat2	Sor1	Srebf1	Srebf2	Stab1	Stab2	Stard3	Tm7sf2	Tretr1	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	SBM1010551	ENSMUST00000030010.3	Abca1	ENSMUSG0000015243	ATP-binding cassette, sub-family A (ABC1), member 1 Source MGI Symbol Acc MGI 99607
A02	SBM0969687	ENSMUST00000149385.7	Abca2	ENSMUSG0000026944	ATP-binding cassette, sub-family A (ABC1), member 2 Source MGI Symbol Acc MGI 99606
A03	SBM0939203	ENSMUST0000024829.7	Abcg1	ENSMUSG0000024030	ATP binding cassette subfamily G member 1 Source MGI Symbol Acc MGI 107704
A04	SBM0980968	ENSMUST0000041053.10	Acaa2	ENSMUSG0000036880	acetyl-Coenzyme A acyltransferase 2 (mitochondrial 3-oxoacyl-Coenzyme A thiolase) Source MGI Symbol Acc MGI 1098623
A05	SBM1044789	ENSMUST00000123648.1	Akr1d1	ENSMUSG0000038641	aldo-keto reductase family 1, member D1 Source MGI Symbol Acc MGI 2384785
A06	SBM0898022	ENSMUST00000136091.7	Angptl3	ENSMUSG0000028553	angiotensin-like 3 Source MGI Symbol Acc MGI 1353627
A07	SBM0868609	ENSMUST00000123924.7	Ankra2	ENSMUSG0000021661	ankyrin repeat, family A (RFXANK-like), 2 Source MGI Symbol Acc MGI 1915808
A08	SBM0916212	ENSMUST00000132155.1	Apoa1	ENSMUSG0000032083	apolipoprotein A-I Source MGI Symbol Acc MGI 88049
A09	SBM0855037	ENSMUST00000111320.7	Apoa2	ENSMUSG0000005681	apolipoprotein A-II Source MGI Symbol Acc MGI 88050
A10	SBM0808432	ENSMUST0000034585.6	Apoa4	ENSMUSG0000032080	apolipoprotein A-IV Source MGI Symbol Acc MGI 88051
A11	SBM1016873	ENSMUST0000037520.13	Apob	ENSMUSG0000020609	apolipoprotein B Source MGI Symbol Acc MGI 88052
A12	SBM0912636	ENSMUST00000118649.7	Apoc3	ENSMUSG0000032081	apolipoprotein C-III Source MGI Symbol Acc MGI 88055
B01	SBM0995501	ENSMUST00000130560.7	Apod	ENSMUSG0000022548	apolipoprotein D Source MGI Symbol Acc MGI 88056
B02	SBM0912771	ENSMUST00000173739.7	Apoe	ENSMUSG0000002985	apolipoprotein E Source MGI Symbol Acc MGI 88057
B03	SBM1065589	ENSMUST00000050901.3	Apof	ENSMUSG0000047631	apolipoprotein F Source MGI Symbol Acc MGI 104539
B04	SBM0969498	ENSMUST00000229445.1	Apol8	ENSMUSG0000056656	apolipoprotein L 8 Source MGI Symbol Acc MGI 2444921
B05	SBM0740042	ENSMUST00000145849.7	Cdh13	ENSMUSG0000031841	cadherin 13 Source MGI Symbol Acc MGI 99551
B06	SBM0827569	ENSMUST00000028161.5	Cel	ENSMUSG0000026818	carboxyl ester lipase Source MGI Symbol Acc MGI 88374
B07	SBM0826142	ENSMUST00000134565.1	Cela3b	ENSMUSG0000023433	chymotrypsin-like elastase family, member 3B Source MGI Symbol Acc MGI 1915118
B08	SBM1074339	ENSMUST00000032138.14	Cnbp	ENSMUSG0000030057	cellular nucleic acid binding protein Source MGI Symbol Acc MGI 88431
B09	SBM1070170	ENSMUST00000040069.9	Colec12	ENSMUSG0000036103	collectin sub-family member 12 Source MGI Symbol Acc MGI 2152907
B10	SBM0905444	ENSMUST00000194251.1	Crp	ENSMUSG0000037942	C-reactive protein, pentraxin-related Source MGI Symbol Acc MGI 88512
B11	SBM0926670	ENSMUST00000019064.8	Cxcl16	ENSMUSG0000018920	chemokine (C-X-C motif) ligand 16 Source MGI Symbol Acc MGI 1932682
B12	SBM0917439	ENSMUST00000162178.7	Cyb5r3	ENSMUSG0000018042	cytochrome b5 reductase 3 Source MGI Symbol Acc MGI 94893
C01	SBM1025581	ENSMUST00000034874.13	Cyp11a1	ENSMUSG0000032323	cytochrome P450, family 11, subfamily a, polypeptide 1 Source MGI Symbol Acc MGI 88582
C02	SBM0971507	ENSMUST00000170988.1	Cyp39a1	ENSMUSG0000023963	cytochrome P450, family 39, subfamily a, polypeptide 1 Source MGI Symbol Acc MGI 1927096
C03	SBM1000430	ENSMUST00000221708.1	Cyp46a1	ENSMUSG0000021259	cytochrome P450, family 46, subfamily a, polypeptide 1 Source MGI Symbol Acc MGI 1341877
C04	SBM0685273	ENSMUST00000151539.2	Cyp51	ENSMUSG0000001467	cytochrome P450, family 51 Source MGI Symbol Acc MGI 106040
C05	SBM0922584	ENSMUST00000147346.1	Cyp7a1	ENSMUSG0000028240	cytochrome P450, family 7, subfamily a, polypeptide 1 Source MGI Symbol Acc MGI 106091
C06	SBM0824492	ENSMUST00000035625.6	Cyp7b1	ENSMUSG0000039519	cytochrome P450, family 7, subfamily b, polypeptide 1 Source MGI Symbol Acc MGI 104978
C07	SBM0980722	ENSMUST00000047973.3	Dhcr24	ENSMUSG0000034926	24-dehydrocholesterol reductase Source MGI Symbol Acc MGI 1922004
C08	SBM0973838	ENSMUST00000073878.11	Dhcr7	ENSMUSG0000058454	7-dehydrocholesterol reductase Source MGI Symbol Acc MGI 1298378
C09	SBM0693154	ENSMUST00000143223.1	Ebp	ENSMUSG0000031168	phenylalkylamine Ca <sup>2+</sup> antagonist (emopamil) binding protein Source MGI Symbol Acc MGI 107822
C10	SBM0891878	ENSMUST00000223810.1	Fdft1	ENSMUSG0000021273	farnesyl diphosphate farnesyl transferase 1 Source MGI Symbol Acc MGI 102706
		ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0917916	199668.2	Fdps	000059743	farnesyl diphosphate synthetase Source MGI Symbol Acc MGI 104888
C12	SBM0836238	ENSMUST00000 186164.6	Hdlbp	ENSMUSG00 000034088	high density lipoprotein (HDL) binding protein Source MGI Symbol Acc MGI 99256
D01	SBM0852758	ENSMUST00000 169196.7	Hmgcr	ENSMUSG00 000021670	3-hydroxy-3-methylglutaryl-Coenzyme A reductase Source MGI Symbol Acc MGI 96159
D02	SBM1074266	ENSMUST00000 224188.1	Hmgcs1	ENSMUSG00 000093930	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1 Source MGI Symbol Acc MGI 107592
D03	SBM0862891	ENSMUST00000 090746.2	Hmgcs2	ENSMUSG00 000027875	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 2 Source MGI Symbol Acc MGI 101939
D04	SBM0957211	ENSMUST00000 177400.7	Idi1	ENSMUSG00 000058258	isopentenyl-diphosphate delta isomerase Source MGI Symbol Acc MGI 2442264
D05	SBM0699422	ENSMUST00000 038598.2	Idi2	ENSMUSG00 000033520	isopentenyl-diphosphate delta isomerase 2 Source MGI Symbol Acc MGI 2444315
D06	SBM0926369	ENSMUST00000 150568.7	Il4	ENSMUSG00 000000869	interleukin 4 Source MGI Symbol Acc MGI 96556
D07	SBM0759766	ENSMUST00000 199728.1	Insig1	ENSMUSG00 000045294	insulin induced gene 1 Source MGI Symbol Acc MGI 1916289
D08	SBM0789290	ENSMUST00000 071064.12	Insig2	ENSMUSG00 000003721	insulin induced gene 2 Source MGI Symbol Acc MGI 1920249
D09	SBM0983169	ENSMUST00000 038896.7	Lcat	ENSMUSG00 000035237	lecithin cholesterol acyltransferase Source MGI Symbol Acc MGI 96755
D10	SBM0960715	ENSMUST00000 217111.1	Ldlr	ENSMUSG00 000032193	low density lipoprotein receptor Source MGI Symbol Acc MGI 96765
D11	SBM1032558	ENSMUST00000 037828.7	Ldlrap1	ENSMUSG00 000037295	low density lipoprotein receptor adaptor protein 1 Source MGI Symbol Acc MGI 2140175
D12	SBM0718370	ENSMUST00000 169505.1	Lep	ENSMUSG00 000059201	leptin Source MGI Symbol Acc MGI 104663
E01	SBM1009382	ENSMUST00000 003207.10	Lipe	ENSMUSG00 000003123	lipase, hormone sensitive Source MGI Symbol Acc MGI 96790
E02	SBM0935812	ENSMUST00000 227760.1	Lrp10	ENSMUSG00 000022175	low-density lipoprotein receptor-related protein 10 Source MGI Symbol Acc MGI 1929480
E03	SBM1089762	ENSMUST00000 022916.12	Lrp12	ENSMUSG00 000022305	low density lipoprotein-related protein 12 Source MGI Symbol Acc MGI 2443132
E04	SBM0973750	ENSMUST00000 129974.2	Lrp1b	ENSMUSG00 000049252	low density lipoprotein-related protein 1B (deleted in tumors) Source MGI Symbol Acc MGI 2151136
E05	SBM0842955	ENSMUST00000 203773.1	Lrp6	ENSMUSG00 000030201	low density lipoprotein receptor-related protein 6 Source MGI Symbol Acc MGI 1298218
E06	SBM0896249	ENSMUST00000 030986.14	Lrpap1	ENSMUSG00 000029103	low density lipoprotein receptor-related protein associated protein 1 Source MGI Symbol Acc MGI 96829
E07	SBM0816312	ENSMUST00000 212736.1	Mbtps1	ENSMUSG00 000031835	membrane-bound transcription factor peptidase, site 1 Source MGI Symbol Acc MGI 1927235
E08	SBM0718194	ENSMUST00000 211883.1	Mvd	ENSMUSG00 000006517	mevalonate (diphospho) decarboxylase Source MGI Symbol Acc MGI 2179327
E09	SBM0885575	ENSMUST00000 137167.7	Mvk	ENSMUSG00 000041939	mevalonate kinase Source MGI Symbol Acc MGI 107624
E10	SBM0814703	ENSMUST00000 004505.2	Npc1l1	ENSMUSG00 000020447	NPC1 like intracellular cholesterol transporter 1 Source MGI Symbol Acc MGI 2685089
E11	SBM1024270	ENSMUST00000 042706.2	Nr0b2	ENSMUSG00 000037583	nuclear receptor subfamily 0, group B, member 2 Source MGI Symbol Acc MGI 1346344
E12	SBM0772834	ENSMUST00000 058126.14	Nr1h4	ENSMUSG00 000047638	nuclear receptor subfamily 1, group H, member 4 Source MGI Symbol Acc MGI 1352464
F01	SBM0764598	ENSMUST00000 033715.4	Nsdhl	ENSMUSG00 000031349	NAD(P) dependent steroid dehydrogenase-like Source MGI Symbol Acc MGI 1099438
F02	SBM1042162	ENSMUST00000 183258.7	Olr1	ENSMUSG00 000030162	oxidized low density lipoprotein (lectin-like) receptor 1 Source MGI Symbol Acc MGI 1261434
F03	SBM0771362	ENSMUST00000 118313.7	Osbpl1a	ENSMUSG00 000044252	oxysterol binding protein-like 1A Source MGI Symbol Acc MGI 1927551
F04	SBM0814975	ENSMUST00000 137627.1	Osbpl5	ENSMUSG00 000037606	oxysterol binding protein-like 5 Source MGI Symbol Acc MGI 1930265
F05	SBM1092829	ENSMUST00000 049507.5	Pcsk9	ENSMUSG00 000044254	proprotein convertase subtilisin/kexin type 9 Source MGI Symbol Acc MGI 2140260
F06	SBM0757725	ENSMUST00000 107410.7	Pmvk	ENSMUSG00 000027952	phosphomevalonate kinase Source MGI Symbol Acc MGI 1915853
F07	SBM0865243	ENSMUST00000 169040.2	Ppard	ENSMUSG00 000002250	peroxisome proliferator activator receptor delta Source MGI Symbol Acc MGI 101884
F08	SBM0905959	ENSMUST00000 228218.1	Prkaa1	ENSMUSG00 000050697	protein kinase, AMP-activated, alpha 1 catalytic subunit Source MGI Symbol Acc MGI 2145955
F09	SBM0859779	ENSMUST00000 030243.7	Prkaa2	ENSMUSG00 000028518	protein kinase, AMP-activated, alpha 2 catalytic subunit Source MGI Symbol Acc MGI 1336173
F10	SBM0764294	ENSMUST00000 150135.7	Prkag2	ENSMUSG00 000028944	protein kinase, AMP-activated, gamma 2 non-catalytic subunit Source MGI Symbol Acc MGI 1336153

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0895638	ENSMUST00000098350.9	Scap	ENSMUSG0000032485	SREBF chaperone Source MGI Symbol Acc MGI 2135958
F12	SBM0901368	ENSMUST00000118243.1	Scarf1	ENSMUSG0000038188	scavenger receptor class F, member 1 Source MGI Symbol Acc MGI 2449455
G01	SBM0729345	ENSMUST00000201535.3	Snx17	ENSMUSG0000029146	sorting nexin 17 Source MGI Symbol Acc MGI 2387801
G02	SBM1081442	ENSMUST00000051396.12	Soat1	ENSMUSG0000026600	sterol O-acyltransferase 1 Source MGI Symbol Acc MGI 104665
G03	SBM0883219	ENSMUST00000023806.13	Soat2	ENSMUSG0000023045	sterol O-acyltransferase 2 Source MGI Symbol Acc MGI 1332226
G04	SBM0828934	ENSMUST00000060989.8	Sorl1	ENSMUSG0000049313	sortilin-related receptor, LDLR class A repeats-containing Source MGI Symbol Acc MGI 1202296
G05	SBM0984070	ENSMUST00000020846.7	Sreb1	ENSMUSG0000020538	sterol regulatory element binding transcription factor 1 Source MGI Symbol Acc MGI 107606
G06	SBM0762835	ENSMUST000000229336.1	Sreb2	ENSMUSG0000022463	sterol regulatory element binding factor 2 Source MGI Symbol Acc MGI 107585
G07	SBM0967880	ENSMUST000000159208.7	Stab1	ENSMUSG0000042286	stabilin 1 Source MGI Symbol Acc MGI 2178742
G08	SBM1078728	ENSMUST000000218366.1	Stab2	ENSMUSG0000035459	stabilin 2 Source MGI Symbol Acc MGI 2178743
G09	SBM0946152	ENSMUST000000018311.4	Stard3	ENSMUSG0000018167	START domain containing 3 Source MGI Symbol Acc MGI 1929618
G10	SBM1026741	ENSMUST000000113543.8	Tm7sf2	ENSMUSG0000024799	transmembrane 7 superfamily member 2 Source MGI Symbol Acc MGI 1920416
G11	SBM0799528	ENSMUST000000190020.1	Trerf1	ENSMUSG0000064043	transcriptional regulating factor 1 Source MGI Symbol Acc MGI 2442086
G12	SBM0933550	ENSMUST000000047645.12	Vldlr	ENSMUSG0000024924	very low density lipoprotein receptor Source MGI Symbol Acc MGI 98935
H01	SBM1220560	ENSMUST000000100497.10	Actb	ENSMUSG0000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST000000102476.4	B2m	ENSMUSG0000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST000000117757.8	Gapdh	ENSMUSG0000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST000000026613.13	Gusb	ENSMUSG0000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST000000166469.7	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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