

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

## Mouse Notch Signaling Targets

Cat. no. 249950 SBMM-259ZA

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	Abl1	Adamts1	Bdnf	Cbfa2t3	Ccnd1	Ccnd2	Clock	Crebbp	Cx3cl1	Cxcl1	Cxcl12	Dkk1
B	Dtx1	Edn1	Efnal	Efnb1	Egr3	Fabp7	Fox1	Flt1	Foxc1	Foxd3	Foxf1	Frzb
C	Fzd5	Gadd45b	Gpsm2	Hbegf	Hes1	Hes5	Hes7	Hey1	Hey2	Heyl	Hspb8	Id1
D	Id2	Id3	Id4	Igfbp3	Il33	Jag1	Jun	Kalm	Kifl	Krt14	Ling	Mark1
E	Msc	Myf5	Nampt	Nes	Nodal	Notch1	Notch3	Nrarp	Pax6	Pbx1	Pcdh8	Pdgfrb
F	Pdgfra	Pdgfrb	Ptcrn	Ptgs2	Rbpj	Rbpjl	Rhov	Rnd1	Runx1	Runx2	S1pr3	Sgpl1
G	Snai1	Snw1	Socs3	Sox9	Tcf15	Tec	Tnc	Vegfa	Ccn4	Wnt4	Wnt5a	Wnt6
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	SBM1025688	ENSMUST00000127714.1	Abl1	ENSMUSG0000026842	c-abl oncogene 1, non-receptor tyrosine kinase Source MGI Symbol Acc MGI 87859
A02	SBM0709231	ENSMUST00000125897.1	Adams1	ENSMUSG0000022893	a disintegrin-like and metallopeptidase (reprolysin type) with thrombospondin type 1 motif, 1 Source MGI Symbol Acc MGI 109249
A03	SBM0985592	ENSMUST00000111042.2	Bdnf	ENSMUSG0000048482	brain derived neurotrophic factor Source MGI Symbol Acc MGI 88145
A04	SBM0949013	ENSMUST00000142535.7	Cbfa2f3	ENSMUSG0000006362	CBFA2/RUNX1 translocation partner 3 Source MGI Symbol Acc MGI 1338013
A05	SBM0706150	ENSMUST00000093962.4	Ccnd1	ENSMUSG0000070348	cyclin D1 Source MGI Symbol Acc MGI 88313
A06	SBM0977018	ENSMUST00000201066.1	Ccnd2	ENSMUSG0000000184	cyclin D2 Source MGI Symbol Acc MGI 88314
A07	SBM0751966	ENSMUST00000202857.3	Clock	ENSMUSG0000029238	circadian locomotor output cycles kaput Source MGI Symbol Acc MGI 99698
A08	SBM0926551	ENSMUST00000205765.1	Crebbp	ENSMUSG0000022521	CREB binding protein Source MGI Symbol Acc MGI 1098280
A09	SBM0783722	ENSMUST00000034230.6	Cx3cl1	ENSMUSG0000031778	chemokine (C-X3-C motif) ligand 1 Source MGI Symbol Acc MGI 1097153
A10	SBM0998835	ENSMUST00000031327.8	Cxcl1	ENSMUSG0000029380	chemokine (C-X-C motif) ligand 1 Source MGI Symbol Acc MGI 108068
A11	SBM0703161	ENSMUST00000134244.1	Cxcl12	ENSMUSG0000061353	chemokine (C-X-C motif) ligand 12 Source MGI Symbol Acc MGI 103556
A12	SBM0673405	ENSMUST00000025803.8	Dkk1	ENSMUSG0000024868	dickkopf WNT signaling pathway inhibitor 1 Source MGI Symbol Acc MGI 1329040
B01	SBM0872158	ENSMUST00000145174.7	Dtx1	ENSMUSG0000029603	deltex 1, E3 ubiquitin ligase Source MGI Symbol Acc MGI 1352744
B02	SBM0992224	ENSMUST00000021796.8	Edn1	ENSMUSG0000021367	endothelin 1 Source MGI Symbol Acc MGI 95283
B03	SBM0921661	ENSMUST00000118587.7	Efna1	ENSMUSG0000027954	ephrin A1 Source MGI Symbol Acc MGI 103236
B04	SBM1011520	ENSMUST00000151750.1	Efnb1	ENSMUSG0000031217	ephrin B1 Source MGI Symbol Acc MGI 102708
B05	SBM0735904	ENSMUST00000035908.2	Egr3	ENSMUSG0000033730	early growth response 3 Source MGI Symbol Acc MGI 1306780
B06	SBM0966652	ENSMUST00000020024.11	Fabp7	ENSMUSG0000019874	fatty acid binding protein 7, brain Source MGI Symbol Acc MGI 101916
B07	SBM0817574	ENSMUST00000099678.4	Fjx1	ENSMUSG0000075012	four jointed box 1 Source MGI Symbol Acc MGI 1341907
B08	SBM0996637	ENSMUST00000110529.5	Flt1	ENSMUSG0000029648	FMS-like tyrosine kinase 1 Source MGI Symbol Acc MGI 95558
B09	SBM1093228	ENSMUST00000062292.4	Foxc1	ENSMUSG0000050295	forkhead box C1 Source MGI Symbol Acc MGI 1347466
B10	SBM0904577	ENSMUST00000087285.4	Foxd3	ENSMUSG0000067261	forkhead box D3 Source MGI Symbol Acc MGI 1347473
B11	SBM0974015	ENSMUST00000181504.1	Foxf1	ENSMUSG0000042812	forkhead box F1 Source MGI Symbol Acc MGI 1347470
B12	SBM0847786	ENSMUST00000028389.3	Frzb	ENSMUSG0000027004	frizzled-related protein Source MGI Symbol Acc MGI 892032
C01	SBM0841457	ENSMUST00000063982.6	Fzd5	ENSMUSG0000045005	frizzled class receptor 5 Source MGI Symbol Acc MGI 108571
C02	SBM0915027	ENSMUST00000220246.1	Gadd45b	ENSMUSG0000015312	growth arrest and DNA-damage-inducible 45 beta Source MGI Symbol Acc MGI 107776
C03	SBM1068721	ENSMUST00000029482.15	Gpsm2	ENSMUSG0000027883	G-protein signalling modulator 2 (AGS3-like, C. elegans) Source MGI Symbol Acc MGI 1923373
C04	SBM0904142	ENSMUST00000025363.6	Hbegf	ENSMUSG0000024486	heparin-binding EGF-like growth factor Source MGI Symbol Acc MGI 96070
C05	SBM0965557	ENSMUST00000023171.7	Hes1	ENSMUSG0000022528	hes family bHLH transcription factor 1 Source MGI Symbol Acc MGI 104853
C06	SBM1008430	ENSMUST00000151480.1	Hes5	ENSMUSG0000048001	hes family bHLH transcription factor 5 Source MGI Symbol Acc MGI 104876
C07	SBM1025507	ENSMUST00000024543.2	Hes7	ENSMUSG0000023781	hes family bHLH transcription factor 7 Source MGI Symbol Acc MGI 2135679
C08	SBM0693801	ENSMUST00000192102.1	Hey1	ENSMUSG0000040289	hairy/enhancer-of-split related with YRPW motif 1 Source MGI Symbol Acc MGI 1341800
C09	SBM0700946	ENSMUST00000019924.8	Hey2	ENSMUSG0000019789	hairy/enhancer-of-split related with YRPW motif 2 Source MGI Symbol Acc MGI 1341884
C10	SBM0821276	ENSMUST00000127172.1	Heyl	ENSMUSG0000032744	hairy/enhancer-of-split related with YRPW motif-like Source MGI Symbol Acc MGI 1860511
		ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0712166	036991.4	Hspb8	000041548	heat shock protein 8 Source MGI Symbol Acc MGI 2135756
C12	SBM0688367	ENSMUST00000109824.1	Id1	ENSMUSG0000042745	inhibitor of DNA binding 1 Source MGI Symbol Acc MGI 96396
D01	SBM1022270	ENSMUST00000020974.6	Id2	ENSMUSG0000020644	inhibitor of DNA binding 2 Source MGI Symbol Acc MGI 96397
D02	SBM1070355	ENSMUST00000008016.2	Id3	ENSMUSG0000007872	inhibitor of DNA binding 3 Source MGI Symbol Acc MGI 96398
D03	SBM0983694	ENSMUST00000021810.2	Id4	ENSMUSG00000021379	inhibitor of DNA binding 4 Source MGI Symbol Acc MGI 99414
D04	SBM0693110	ENSMUST00000020702.10	Igfbp3	ENSMUSG0000020427	insulin-like growth factor binding protein 3 Source MGI Symbol Acc MGI 96438
D05	SBM0679001	ENSMUST00000120388.8	Il33	ENSMUSG0000024810	interleukin 33 Source MGI Symbol Acc MGI 1924375
D06	SBM0986327	ENSMUST00000028735.7	Jag1	ENSMUSG0000027276	jagged 1 Source MGI Symbol Acc MGI 1095416
D07	SBM1045409	ENSMUST00000107094.1	Jun	ENSMUSG0000052684	jun proto-oncogene Source MGI Symbol Acc MGI 96646
D08	SBM0789636	ENSMUST00000151491.7	Kalrn	ENSMUSG0000061751	kalirin, RhoGEF kinase Source MGI Symbol Acc MGI 2685385
D09	SBM0685433	ENSMUST00000105283.8	Kitl	ENSMUSG0000019966	kit ligand Source MGI Symbol Acc MGI 96974
D10	SBM0899095	ENSMUST00000007272.7	Krt14	ENSMUSG0000045545	keratin 14 Source MGI Symbol Acc MGI 96688
D11	SBM1047216	ENSMUST00000200626.4	Lfng	ENSMUSG0000029570	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase Source MGI Symbol Acc MGI 1095413
D12	SBM1064873	ENSMUST00000192657.1	Mark1	ENSMUSG0000026620	MAP/microtubule affinity regulating kinase 1 Source MGI Symbol Acc MGI 2664902
E01	SBM0703788	ENSMUST00000027062.6	Msc	ENSMUSG0000025930	musculin Source MGI Symbol Acc MGI 1333884
E02	SBM1013382	ENSMUST00000000445.1	Myf5	ENSMUSG0000000435	myogenic factor 5 Source MGI Symbol Acc MGI 97252
E03	SBM0859199	ENSMUST00000218491.1	Nampt	ENSMUSG0000020572	nicotinamide phosphoribosyltransferase Source MGI Symbol Acc MGI 1929865
E04	SBM0981462	ENSMUST00000160694.1	Nes	ENSMUSG0000004891	nestin Source MGI Symbol Acc MGI 101784
E05	SBM1015337	ENSMUST00000049339.6	Nodal	ENSMUSG0000037171	nodal Source MGI Symbol Acc MGI 97359
E06	SBM1060528	ENSMUST00000132820.1	Notch1	ENSMUSG0000026923	notch 1 Source MGI Symbol Acc MGI 97363
E07	SBM0987360	ENSMUST00000087723.4	Notch3	ENSMUSG0000038146	notch 3 Source MGI Symbol Acc MGI 99460
E08	SBM0901166	ENSMUST00000104999.3	Nrarp	ENSMUSG0000078202	Notch-regulated ankyrin repeat protein Source MGI Symbol Acc MGI 1914372
E09	SBM0924606	ENSMUST00000090391.12	Pax6	ENSMUSG0000027168	paired box 6 Source MGI Symbol Acc MGI 97490
E10	SBM1086042	ENSMUST00000064438.10	Pbx1	ENSMUSG0000052534	pre B cell leukemia homeobox 1 Source MGI Symbol Acc MGI 97495
E11	SBM0920520	ENSMUST00000195034.1	Pcdh8	ENSMUSG0000036422	protocadherin 8 Source MGI Symbol Acc MGI 1306800
E12	SBM0947438	ENSMUST00000000500.7	Pdgfb	ENSMUSG0000000489	platelet derived growth factor, B polypeptide Source MGI Symbol Acc MGI 97528
F01	SBM0852876	ENSMUST00000168162.4	Pdgfra	ENSMUSG0000029231	platelet derived growth factor receptor, alpha polypeptide Source MGI Symbol Acc MGI 97530
F02	SBM0934218	ENSMUST00000025522.10	Pdgfrb	ENSMUSG0000024620	platelet derived growth factor receptor, beta polypeptide Source MGI Symbol Acc MGI 97531
F03	SBM0874223	ENSMUST00000041012.8	Ptcra	ENSMUSG0000036858	pre T cell antigen receptor alpha Source MGI Symbol Acc MGI 104857
F04	SBM0782881	ENSMUST00000035065.8	Ptgs2	ENSMUSG0000032487	prostaglandin-endoperoxide synthase 2 Source MGI Symbol Acc MGI 97798
F05	SBM0925479	ENSMUST00000201912.3	Rbpj	ENSMUSG0000039191	recombination signal binding protein for immunoglobulin kappa J region Source MGI Symbol Acc MGI 96522
F06	SBM0676122	ENSMUST00000017151.1	Rbpjl	ENSMUSG0000017007	recombination signal binding protein for immunoglobulin kappa J region-like Source MGI Symbol Acc MGI 1196616
F07	SBM1034505	ENSMUST00000037360.7	Rhov	ENSMUSG0000034226	ras homolog family member V Source MGI Symbol Acc MGI 2444227
F08	SBM0739723	ENSMUST00000003451.10	Rnd1	ENSMUSG0000054855	Rho family GTPase 1 Source MGI Symbol Acc MGI 2444878
F09	SBM0812229	ENSMUST00000168195.7	Runx1	ENSMUSG0000022952	runt related transcription factor 1 Source MGI Symbol Acc MGI 99852
F10	SBM0865204	ENSMUST00000113571.9	Runx2	ENSMUSG0000039153	runt related transcription factor 2 Source MGI Symbol Acc MGI 99829

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0917037	ENSMUST00000087978.4	S1pr3	ENSMUSG0000067586	sphingosine-1-phosphate receptor 3 Source MGI Symbol Acc MGI 1339365
F12	SBM1065033	ENSMUST00000122259.7	Sgpl1	ENSMUSG0000020097	sphingosine phosphate lyase 1 Source MGI Symbol Acc MGI 1261415
G01	SBM0756361	ENSMUST00000052631.7	Snai1	ENSMUSG0000042821	snail family zinc finger 1 Source MGI Symbol Acc MGI 98330
G02	SBM0713138	ENSMUST00000021428.8	Snw1	ENSMUSG0000021039	SNW domain containing 1 Source MGI Symbol Acc MGI 1913604
G03	SBM0977814	ENSMUST00000054002.3	Socs3	ENSMUSG0000053113	suppressor of cytokine signaling 3 Source MGI Symbol Acc MGI 1201791
G04	SBM1029433	ENSMUST00000000579.2	Sox9	ENSMUSG0000000567	SRY (sex determining region Y)-box 9 Source MGI Symbol Acc MGI 98371
G05	SBM0737819	ENSMUST00000089112.5	Tcf15	ENSMUSG0000068079	transcription factor 15 Source MGI Symbol Acc MGI 104664
G06	SBM0936880	ENSMUST00000113594.7	Tec	ENSMUSG0000029217	tec protein tyrosine kinase Source MGI Symbol Acc MGI 98662
G07	SBM1089732	ENSMUST00000107377.9	Tnc	ENSMUSG0000028364	tenascin C Source MGI Symbol Acc MGI 101922
G08	SBM1079198	ENSMUST00000217017.1	Vegfa	ENSMUSG0000023951	vascular endothelial growth factor A Source MGI Symbol Acc MGI 103178
G09	SBM1010994	ENSMUST00000230535.1	Ccn4	ENSMUSG0000005124	cellular communication network factor 4 Source MGI Symbol Acc MGI 1197008
G10	SBM0985316	ENSMUST00000045747.4	Wnt4	ENSMUSG0000036856	wingless-type MMTV integration site family, member 4 Source MGI Symbol Acc MGI 98957
G11	SBM0893772	ENSMUST00000112272.1	Wnt5a	ENSMUSG0000021994	wingless-type MMTV integration site family, member 5A Source MGI Symbol Acc MGI 98958
G12	SBM0965462	ENSMUST00000189544.1	Wnt6	ENSMUSG0000033227	wingless-type MMTV integration site family, member 6 Source MGI Symbol Acc MGI 98960
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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