

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

## Mouse Cell Lineage Identification

Cat. no. 249950 SBMM-508ZA

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	Alb	Apo1	Aqp1	Bmp4	Ccr5	Cd34	Cd3e	Cd79a	Chat	Col10a1	Comp	Cpa1
B	Ctsk	Dcn	Dcx	Dnmt3b	Dpp4	Eno1	Fabp7	Fgf5	Foxa1	Foxd3	Foxp1	G6pc
C	God1	God2	Galc	Gata1	Gata2	Gata6	Gbx2	Gdf3	Gfap	Hand1	Hand2	Hes5
D	Hnf4a	Ibsp	Igf2	Ins2	Ilgb4	Krt10	Krt14	Krt19	Lefty1	Map3k12	Miox	Mxd1
E	Msln	Myh1	Myh11	Myh7	Myl3	Nanog	Neurod1	Neurog2	Nkx2-2	Nppa	Olig2	Otx2
F	Podgra	Podxl	Pou4f2	Pou5f1	Prom1	Ptcrn	Rcvm	Runx1	Ryr2	Sftpb	Sftpd	Slc17a6
G	Slc17a7	Slc2a2	Slc32a1	Smtn	Sox17	Sox2	Sox7	T	Tat	Tyr	Zfp42	Zic1
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	SBM0873914	ENSMUST00000201356.1	Alb	ENSMUSG0000029368	albumin Source MGI Symbol Acc MGI 87991
A02	SBM0829130	ENSMUST00000152958.7	ApoH	ENSMUSG0000000049	apolipoprotein H Source MGI Symbol Acc MGI 88058
A03	SBM1015203	ENSMUST00000004774.3	AQP1	ENSMUSG0000004655	aquaporin 1 Source MGI Symbol Acc MGI 103201
A04	SBM0845886	ENSMUST00000100676.2	BMP4	ENSMUSG0000021835	bone morphogenetic protein 4 Source MGI Symbol Acc MGI 88180
A05	SBM0964476	ENSMUST00000111442.2	CCR5	ENSMUSG0000079227	chemokine (C-C motif) receptor 5 Source MGI Symbol Acc MGI 107182
A06	SBM1031595	ENSMUST00000110815.8	CD34	ENSMUSG0000016494	CD34 antigen Source MGI Symbol Acc MGI 88329
A07	SBM0819334	ENSMUST00000214582.1	CD3E	ENSMUSG0000032093	CD3 antigen, epsilon polypeptide Source MGI Symbol Acc MGI 88332
A08	SBM1062752	ENSMUST00000003469.7	CD79A	ENSMUSG0000003379	CD79A antigen (immunoglobulin-associated alpha) Source MGI Symbol Acc MGI 101774
A09	SBM0804867	ENSMUST00000070125.5	CHAT	ENSMUSG0000021919	choline acetyltransferase Source MGI Symbol Acc MGI 88392
A10	SBM0799167	ENSMUST00000105511.1	COL10A1	ENSMUSG0000039462	collagen, type X, alpha 1 Source MGI Symbol Acc MGI 88445
A11	SBM0945561	ENSMUST00000003659.8	COMP	ENSMUSG0000031849	cartilage oligomeric matrix protein Source MGI Symbol Acc MGI 88469
A12	SBM0701451	ENSMUST00000031806.9	CPA1	ENSMUSG0000054446	carboxypeptidase A1, pancreatic Source MGI Symbol Acc MGI 88478
B01	SBM0898879	ENSMUST00000015664.4	CTSK	ENSMUSG0000028111	cathepsin K Source MGI Symbol Acc MGI 107823
B02	SBM0910615	ENSMUST000000219539.1	DCN	ENSMUSG0000019929	decorin Source MGI Symbol Acc MGI 94872
B03	SBM1025904	ENSMUST000000087313.9	DCX	ENSMUSG0000031285	doublecortin Source MGI Symbol Acc MGI 1277171
B04	SBM0792760	ENSMUST00000103151.7	DNMT3B	ENSMUSG0000027478	DNA methyltransferase 3B Source MGI Symbol Acc MGI 1261819
B05	SBM0812511	ENSMUST00000047812.7	DPP4	ENSMUSG0000035000	dipeptidylpeptidase 4 Source MGI Symbol Acc MGI 94919
B06	SBM0855174	ENSMUST00000141931.1	ENO1	ENSMUSG0000063524	enolase 1, alpha non-neuron Source MGI Symbol Acc MGI 95393
B07	SBM0966652	ENSMUST00000020024.11	FABP7	ENSMUSG0000019874	fatty acid binding protein 7, brain Source MGI Symbol Acc MGI 101916
B08	SBM0796867	ENSMUST000000200059.1	FGF5	ENSMUSG0000029337	fibroblast growth factor 5 Source MGI Symbol Acc MGI 95519
B09	SBM0971553	ENSMUST00000044380.7	FOXA1	ENSMUSG0000035451	forkhead box A1 Source MGI Symbol Acc MGI 1347472
B10	SBM0904577	ENSMUST00000087285.4	FOXD3	ENSMUSG0000067261	forkhead box D3 Source MGI Symbol Acc MGI 1347473
B11	SBM0708392	ENSMUST00000179669.2	FOXP1	ENSMUSG0000020950	forkhead box G1 Source MGI Symbol Acc MGI 1347464
B12	SBM0872131	ENSMUST00000019469.2	G6PC	ENSMUSG0000078650	glucose-6-phosphatase, catalytic Source MGI Symbol Acc MGI 95607
C01	SBM0887552	ENSMUST00000094934.10	GAD1	ENSMUSG0000070880	glutamate decarboxylase 1 Source MGI Symbol Acc MGI 95632
C02	SBM0983792	ENSMUST00000156728.1	GAD2	ENSMUSG0000026787	glutamic acid decarboxylase 2 Source MGI Symbol Acc MGI 95634
C03	SBM0978870	ENSMUST00000222042.1	GALC	ENSMUSG0000021003	galactosylceramidase Source MGI Symbol Acc MGI 95636
C04	SBM0835110	ENSMUST00000033502.13	GATA1	ENSMUSG0000031162	GATA binding protein 1 Source MGI Symbol Acc MGI 95661
C05	SBM0720280	ENSMUST00000015197.8	GATA2	ENSMUSG0000015053	GATA binding protein 2 Source MGI Symbol Acc MGI 95662
C06	SBM0766909	ENSMUST00000047762.9	GATA6	ENSMUSG000005836	GATA binding protein 6 Source MGI Symbol Acc MGI 107516
C07	SBM0980824	ENSMUST00000187633.1	GBX2	ENSMUSG0000034486	gastrulation brain homeobox 2 Source MGI Symbol Acc MGI 95668
C08	SBM0688843	ENSMUST00000032211.4	GDF3	ENSMUSG0000030117	growth differentiation factor 3 Source MGI Symbol Acc MGI 95686
C09	SBM1028741	ENSMUST00000127909.1	GFAP	ENSMUSG0000020932	glial fibrillary acidic protein Source MGI Symbol Acc MGI 95697
C10	SBM0775153	ENSMUST00000036917.2	HAND1	ENSMUSG0000037335	heart and neural crest derivatives expressed 1 Source MGI Symbol Acc MGI 103577
		ENSMUST000000		ENSMUSG00	heart and neural crest derivatives expressed 2 Source MGI Symbol Acc MGI

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBM0980008	040104.4	Hand2	000038193	103580
C12	SBM1008430	ENSMUST00000151480.1	Hes5	ENSMUSG0000048001	hes family bHLH transcription factor 5 Source MGI Symbol Acc MGI 104876
D01	SBM0836445	ENSMUST00000109411.7	Hnf4a	ENSMUSG00000017950	hepatic nuclear factor 4, alpha Source MGI Symbol Acc MGI 109128
D02	SBM0850141	ENSMUST00000031246.8	lbsp	ENSMUSG00000029306	integrin binding sialoprotein Source MGI Symbol Acc MGI 96389
D03	SBM0905480	ENSMUST00000121128.7	lgf2	ENSMUSG00000048583	insulin-like growth factor 2 Source MGI Symbol Acc MGI 96434
D04	SBM0867142	ENSMUST00000125933.1	Ins2	ENSMUSG0000000215	insulin II Source MGI Symbol Acc MGI 96573
D05	SBM0809070	ENSMUST00000169928.7	Itgb4	ENSMUSG00000020758	integrin beta 4 Source MGI Symbol Acc MGI 96613
D06	SBM0672410	ENSMUST00000211768.1	Krt10	ENSMUSG00000019761	keratin 10 Source MGI Symbol Acc MGI 96685
D07	SBM0899095	ENSMUST00000007272.7	Krt14	ENSMUSG00000045545	keratin 14 Source MGI Symbol Acc MGI 96688
D08	SBM0705809	ENSMUST00000125888.1	Krt19	ENSMUSG00000020911	keratin 19 Source MGI Symbol Acc MGI 96693
D09	SBM0716026	ENSMUST00000037361.8	Lefty1	ENSMUSG00000038793	left right determination factor 1 Source MGI Symbol Acc MGI 107405
D10	SBM0900536	ENSMUST00000169377.7	Map3k12	ENSMUSG00000023050	mitogen-activated protein kinase kinase kinase 12 Source MGI Symbol Acc MGI 1346881
D11	SBM0921897	ENSMUST00000023282.8	Miox	ENSMUSG00000022613	myo-inositol oxygenase Source MGI Symbol Acc MGI 1891725
D12	SBM0675821	ENSMUST00000027778.7	Mixl1	ENSMUSG00000026497	Mix1 homeobox-like 1 (Xenopus laevis) Source MGI Symbol Acc MGI 1351322
E01	SBM0710879	ENSMUST00000237359.1	Msln	ENSMUSG00000063011	mesothelin Source MGI Symbol Acc MGI 1888992
E02	SBM1088338	ENSMUST00000018637.14	Myh1	ENSMUSG00000056328	myosin, heavy polypeptide 1, skeletal muscle, adult Source MGI Symbol Acc MGI 1339711
E03	SBM0717384	ENSMUST00000090287.4	Myh11	ENSMUSG0000018830	myosin, heavy polypeptide 11, smooth muscle Source MGI Symbol Acc MGI 102643
E04	SBM0795774	ENSMUST00000153783.1	Myh7	ENSMUSG00000053093	myosin, heavy polypeptide 7, cardiac muscle, beta Source MGI Symbol Acc MGI 2155600
E05	SBM0703451	ENSMUST00000124267.7	Myl3	ENSMUSG00000059741	myosin, light polypeptide 3 Source MGI Symbol Acc MGI 97268
E06	SBM0911915	ENSMUST00000012540.4	Nanog	ENSMUSG00000012396	Nanog homeobox Source MGI Symbol Acc MGI 1919200
E07	SBM0788481	ENSMUST00000041099.4	Neurod1	ENSMUSG00000034701	neurogenic differentiation 1 Source MGI Symbol Acc MGI 1339708
E08	SBM0947488	ENSMUST00000029587.8	Neurog2	ENSMUSG00000027967	neurogenin 2 Source MGI Symbol Acc MGI 109619
E09	SBM0890176	ENSMUST00000067075.6	Nkx2-2	ENSMUSG00000027434	NK2 homeobox 2 Source MGI Symbol Acc MGI 97347
E10	SBM0848014	ENSMUST00000103230.4	Nppa	ENSMUSG00000041616	natriuretic peptide type A Source MGI Symbol Acc MGI 97367
E11	SBM1006161	ENSMUST00000035608.9	Olig2	ENSMUSG00000039830	oligodendrocyte transcription factor 2 Source MGI Symbol Acc MGI 1355331
E12	SBM0756130	ENSMUST00000119739.1	Otx2	ENSMUSG00000021848	orthodenticle homeobox 2 Source MGI Symbol Acc MGI 97451
F01	SBM0852876	ENSMUST00000168162.4	Pdgfra	ENSMUSG00000029231	platelet derived growth factor receptor, alpha polypeptide Source MGI Symbol Acc MGI 97530
F02	SBM0862510	ENSMUST00000026698.7	Podxl	ENSMUSG00000025608	podocalyxin-like Source MGI Symbol Acc MGI 1351317
F03	SBM0731674	ENSMUST00000034115.4	Pou4f2	ENSMUSG00000031688	POU domain, class 4, transcription factor 2 Source MGI Symbol Acc MGI 102524
F04	SBM0857412	ENSMUST00000173805.7	Pou5f1	ENSMUSG00000024406	POU domain, class 5, transcription factor 1 Source MGI Symbol Acc MGI 101893
F05	SBM0800939	ENSMUST00000165909.7	Prom1	ENSMUSG00000029086	prominin 1 Source MGI Symbol Acc MGI 1100886
F06	SBM0874223	ENSMUST00000041012.8	Ptcrn	ENSMUSG00000036858	pre T cell antigen receptor alpha Source MGI Symbol Acc MGI 104857
F07	SBM0899867	ENSMUST00000021290.1	Rcvrn	ENSMUSG00000020907	recoverin Source MGI Symbol Acc MGI 97883
F08	SBM0812229	ENSMUST00000168195.7	Runx1	ENSMUSG00000022952	runt related transcription factor 1 Source MGI Symbol Acc MGI 99852
F09	SBM0850571	ENSMUST00000220597.1	Ryr2	ENSMUSG00000021313	ryanodine receptor 2, cardiac Source MGI Symbol Acc MGI 99685
F10	SBM1066857	ENSMUST00000182014.7	Sftpb	ENSMUSG00000056370	surfactant associated protein B Source MGI Symbol Acc MGI 109516

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBM0834442	ENSMUST00000077136.4	Sftpd	ENSMUSG00000021795	surfactant associated protein D Source MGI Symbol Acc MGI 109515
F12	SBM1015411	ENSMUST00000207375.1	Slc17a6	ENSMUSG00000030500	solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 6 Source MGI Symbol Acc MGI 2156052
G01	SBM0813536	ENSMUST00000210540.1	Slc17a7	ENSMUSG00000070570	solute carrier family 17 (sodium-dependent inorganic phosphate cotransporter), member 7 Source MGI Symbol Acc MGI 1920211
G02	SBM0691206	ENSMUST00000163536.7	Slc2a2	ENSMUSG00000027690	solute carrier family 2 (facilitated glucose transporter), member 2 Source MGI Symbol Acc MGI 1095438
G03	SBM0731107	ENSMUST00000045738.4	Slc32a1	ENSMUSG00000037771	solute carrier family 32 (GABA vesicular transporter), member 1 Source MGI Symbol Acc MGI 1194488
G04	SBM0886718	ENSMUST00000110011.7	Smtn	ENSMUSG00000020439	smoothelin Source MGI Symbol Acc MGI 1354727
G05	SBM0762251	ENSMUST00000191647.1	Sox17	ENSMUSG00000025902	SRY (sex determining region Y)-box 17 Source MGI Symbol Acc MGI 107543
G06	SBM0819160	ENSMUST00000099151.5	Sox2	ENSMUSG00000074637	SRY (sex determining region Y)-box 2 Source MGI Symbol Acc MGI 98364
G07	SBM1051869	ENSMUST00000079652.6	Sox7	ENSMUSG00000063060	SRY (sex determining region Y)-box 7 Source MGI Symbol Acc MGI 98369
G08	SBM0804890	ENSMUST00000074667.8	T	ENSMUSG00000062327	brachyury, T-box transcription factor T Source MGI Symbol Acc MGI 98472
G09	SBM1043112	ENSMUST00000001720.13	Tat	ENSMUSG00000001670	tyrosine aminotransferase Source MGI Symbol Acc MGI 98487
G10	SBM0733557	ENSMUST00000207164.1	Tyr	ENSMUSG00000004651	tyrosinase Source MGI Symbol Acc MGI 98880
G11	SBM0937462	ENSMUST00000211248.1	Zfp42	ENSMUSG00000051176	zinc finger protein 42 Source MGI Symbol Acc MGI 99187
G12	SBM0852459	ENSMUST00000173121.1	Zic1	ENSMUSG00000032368	zinc finger protein of the cerebellum 1 Source MGI Symbol Acc MGI 106683
H01	SBM1220560	ENSMUST00000100497.10	Actb	ENSMUSG00000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	SBM0675336	ENSMUST00000102476.4	B2m	ENSMUSG00000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	SBM1220562	ENSMUST00000117757.8	Gapdh	ENSMUSG00000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	SBM1220563	ENSMUST00000026613.13	Gusb	ENSMUSG00000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	SBM1220564	ENSMUST00000166469.7	Hsp90ab1	ENSMUSG00000023944	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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