

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

## Rat Type I Interferon Response

Cat. no. 249950 SBRN-016ZA

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	Adar	Adm	Bag3	Bst2	Casp1	Cav1	Cd2	Cd4	Ccl5	Cd38	Cd69	Cd70
B	Cd80	Cd86	Cd9	Cdc37	Cdkn1a	Cdkn1b	Citaa	Crp	Cxcl10	Cxcl9	Ddx58	Eif2ak2
C	Gbp4	Mnda	Ifi30	Ifi1	Ifi2	Ifi3	Ifitm1	Ifitm2	Ifitm3	Ifna5	Ifna2	Ifna4
D	Ifnar1	Ifnb1	Il10	Il15	Il1r1	Il1rn	Il6	Irf1	Irf2	Irf3	Irf5	Irf7
E	Irf9	Isg15	Isg20	Jak1	Jak2	Mal	Met	Mx1	Mx2	Myd88	Nmi	Nos2
F	Oas1a	Oas1b	Oas2	Pml	Prkcz	Psmc2	RT1-Ha	AC120486.5	RT1-M3-1	Slc11a1	Socs1	Sp100
G	Stat1	Stat2	Stat3	Tap1	Timp1	Tlr3	Tlr7	Tlr9	Tnfrsf10	Traf3	Tyk2	Vegfa
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	SBR1214125	ENSRNOT00000028181.5	Adar	ENSRNOG0000020744	adenosine deaminase, RNA-specific Source RGD Symbol Acc 71099
A02	SBR1135593	ENSRNOT00000036718.1	Adm	ENSRNOG0000027030	adrenomedullin Source RGD Symbol Acc 2047
A03	SBR1204128	ENSRNOT00000027616.6	Bag3	ENSRNOG0000020298	Bcl2-associated athanogene 3 Source RGD Symbol Acc 1307794
A04	SBR1098931	ENSRNOT00000087162.1	Bsf2	ENSRNOG0000059900	bone marrow stromal cell antigen 2 Source RGD Symbol Acc 727849
A05	SBR1122190	ENSRNOT00000009993.6	Casp1	ENSRNOG0000007372	caspase 1 Source RGD Symbol Acc 2274
A06	SBR1108638	ENSRNOT00000078250.1	Cav1	ENSRNOG0000056836	caveolin 1 Source RGD Symbol Acc 2280
A07	SBR1165601	ENSRNOT00000009448.3	Ccl2	ENSRNOG0000007159	C-C motif chemokine ligand 2 Source RGD Symbol Acc 3645
A08	SBR1202700	ENSRNOT00000015199.3	Ccl4	ENSRNOG0000011406	C-C motif chemokine ligand 4 Source RGD Symbol Acc 620441
A09	SBR1094349	ENSRNOT00000014865.6	Ccl5	ENSRNOG0000010906	C-C motif chemokine ligand 5 Source RGD Symbol Acc 69069
A10	SBR1175509	ENSRNOT00000004121.4	Cd38	ENSRNOG0000003069	CD38 molecule Source RGD Symbol Acc 2303
A11	SBR1111160	ENSRNOT00000091644.1	Cd69	ENSRNOG0000056783	Cd69 molecule Source RGD Symbol Acc 61318
A12	SBR1113183	ENSRNOT00000070806.1	Cd70	ENSRNOG0000051015	Cd70 molecule Source RGD Symbol Acc 1588573
B01	SBR1120788	ENSRNOT00000089625.1	Cd80	ENSRNOG000001527	Cd80 molecule Source RGD Symbol Acc 2314
B02	SBR1154524	ENSRNOT00000003129.6	Cd86	ENSRNOG0000038835	CD86 molecule Source RGD Symbol Acc 628714
B03	SBR1160464	ENSRNOT00000026633.7	Cd9	ENSRNOG0000019556	CD9 molecule Source RGD Symbol Acc 2318
B04	SBR1127962	ENSRNOT00000042314.3	Cdc37	ENSRNOG0000033426	cell division cycle 37 Source RGD Symbol Acc 71006
B05	SBR1145142	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B06	SBR1124365	ENSRNOT00000049848.1	Cdkn1b	ENSRNOG0000007249	cyclin-dependent kinase inhibitor 1B Source RGD Symbol Acc 69062
B07	SBR1185428	ENSRNOT00000003572.3	Ciita	ENSRNOG0000002659	class II, major histocompatibility complex, transactivator Source RGD Symbol Acc 619813
B08	SBR1169897	ENSRNOT00000000058.6	Crp	ENSRNOG0000000053	C-reactive protein Source RGD Symbol Acc 2411
B09	SBR1153857	ENSRNOT00000003075.7	Cxcl10	ENSRNOG0000022256	C-X-C motif chemokine ligand 10 Source RGD Symbol Acc 620209
B10	SBR1174753	ENSRNOT00000003082.7	Cxcl9	ENSRNOG0000022242	C-X-C motif chemokine ligand 9 Source RGD Symbol Acc 628798
B11	SBR1151012	ENSRNOT00000060765.4	Ddx58	ENSRNOG0000006384	DEXD/H-box helicase 58 Source RGD Symbol Acc 1309460
B12	SBR1161371	ENSRNOT00000089185.1	Eif2ak2	ENSRNOG0000048315	eukaryotic translation initiation factor 2-alpha kinase 2 Source RGD Symbol Acc 3402
C01	SBR1128270	ENSRNOT00000022648.5	Gbp4	ENSRNOG0000028768	guanylate binding protein 4 Source RGD Symbol Acc 1310579
C02	SBR1152649	ENSRNOT00000036040.3	Mnda	ENSRNOG0000003486	myeloid cell nuclear differentiation antigen Source RGD Symbol Acc 1306089
C03	SBR1096964	ENSRNOT00000026225.7	Ifi30	ENSRNOG0000019387	IFI30, lysosomal thiol reductase Source RGD Symbol Acc 1310758
C04	SBR1142864	ENSRNOT00000025770.4	Ifi1	ENSRNOG0000019050	interferon-induced protein with tetratricopeptide repeats 1 Source RGD Symbol Acc 620599
C05	SBR1165552	ENSRNOT00000054757.3	Ifi2	ENSRNOG0000036604	interferon-induced protein with tetratricopeptide repeats 2 Source RGD Symbol Acc 1307804
C06	SBR1131881	ENSRNOT00000031025.4	Ifi3	ENSRNOG0000022839	interferon-induced protein with tetratricopeptide repeats 3 Source RGD Symbol Acc 1359681
C07	SBR1186361	ENSRNOT00000005645.6	Ifitm1	ENSRNOG0000004273	interferon induced transmembrane protein 1 Source RGD Symbol Acc 1307601
C08	SBR1194473	ENSRNOT00000020216.3	Ifitm2	ENSRNOG0000014936	interferon induced transmembrane protein 2 Source RGD Symbol Acc 69332
C09	SBR1160064	ENSRNOT00000020265.7	Ifitm3	ENSRNOG0000015078	interferon induced transmembrane protein 3 Source RGD Symbol Acc 1595844
C10	SBR1208793	ENSRNOT00000049705.1	Ifna5	ENSRNOG0000031046	interferon, alpha 5 Source RGD Symbol Acc 1359312
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1194217	045433.4	Ifna2	000058365	interferon alpha 2 Source RGD Symbol Acc 1311425
C12	SBR1135615	ENSRNOT00000 046207.3	Ifna4	ENSRNOG00 000033823	interferon, alpha 4 Source RGD Symbol Acc 1306334
D01	SBR1218537	ENSRNOT00000 091472.1	Ifnar1	ENSRNOG00 000028594	interferon alpha and beta receptor subunit 1 Source RGD Symbol Acc 1305399
D02	SBR1104910	ENSRNOT00000 008224.2	Ifnb1	ENSRNOG00 000006268	interferon beta 1 Source RGD Symbol Acc 2865
D03	SBR1123238	ENSRNOT00000 006246.5	Il10	ENSRNOG00 000004647	interleukin 10 Source RGD Symbol Acc 2886
D04	SBR1188273	ENSRNOT00000 004590.6	Il15	ENSRNOG00 000003439	interleukin 15 Source RGD Symbol Acc 2887
D05	SBR1113457	ENSRNOT00000 019673.4	Il1r1	ENSRNOG00 000014504	interleukin 1 receptor type 1 Source RGD Symbol Acc 2892
D06	SBR1111330	ENSRNOT00000 007949.6	Il1rn	ENSRNOG00 000005871	interleukin 1 receptor antagonist Source RGD Symbol Acc 621159
D07	SBR1156877	ENSRNOT00000 013732.6	Il6	ENSRNOG00 000010278	interleukin 6 Source RGD Symbol Acc 2901
D08	SBR1170657	ENSRNOT00000 010968.6	Irf1	ENSRNOG00 000008144	interferon regulatory factor 1 Source RGD Symbol Acc 2920
D09	SBR1163923	ENSRNOT00000 013118.6	Irf2	ENSRNOG00 000009824	interferon regulatory factor 2 Source RGD Symbol Acc 1304922
D10	SBR1201960	ENSRNOT00000 027786.6	Irf3	ENSRNOG00 000043388	interferon regulatory factor 3 Source RGD Symbol Acc 1549774
D11	SBR1126971	ENSRNOT00000 010001.6	Irf5	ENSRNOG00 000007437	interferon regulatory factor 5 Source RGD Symbol Acc 1310447
D12	SBR1141330	ENSRNOT00000 023504.6	Irf7	ENSRNOG00 000017414	interferon regulatory factor 7 Source RGD Symbol Acc 1307828
E01	SBR1196772	ENSRNOT00000 026364.4	Irf9	ENSRNOG00 000019478	interferon regulatory factor 9 Source RGD Symbol Acc 1308766
E02	SBR1121179	ENSRNOT00000 039263.5	Isg15	ENSRNOG00 000021802	ISG15 ubiquitin-like modifier Source RGD Symbol Acc 1310312
E03	SBR1137683	ENSRNOT00000 085570.1	Isg20	ENSRNOG00 000054561	interferon stimulated exonuclease gene 20 Source RGD Symbol Acc 1306407
E04	SBR1138663	ENSRNOT00000 064542.1	Jak1	ENSRNOG00 000011157	Janus kinase 1 Source RGD Symbol Acc 69056
E05	SBR1191640	ENSRNOT00000 087011.1	Jak2	ENSRNOG00 000059968	Janus kinase 2 Source RGD Symbol Acc 2939
E06	SBR1185014	ENSRNOT00000 020870.2	Mal	ENSRNOG00 000015445	mal, T-cell differentiation protein Source RGD Symbol Acc 3037
E07	SBR1107950	ENSRNOT00000 086902.1	Met	ENSRNOG00 000052745	MET proto-oncogene, receptor tyrosine kinase Source RGD Symbol Acc 3082
E08	SBR1097477	ENSRNOT00000 039876.5	Mx1	ENSRNOG00 000001959	myxovirus (influenza virus) resistance 1 Source RGD Symbol Acc 3127
E09	SBR1154254	ENSRNOT00000 002695.5	Mx2	ENSRNOG00 000001963	MX dynamin like GTPase 2 Source RGD Symbol Acc 628821
E10	SBR1185632	ENSRNOT00000 018341.5	Myd88	ENSRNOG00 000013634	MYD88, innate immune signal transduction adaptor Source RGD Symbol Acc 735043
E11	SBR1191988	ENSRNOT00000 030373.4	Nmi	ENSRNOG00 000027502	N-myc (and STAT) interactor Source RGD Symbol Acc 1311721
E12	SBR1197401	ENSRNOT00000 073138.2	Nos2	ENSRNOG00 000057443	similar to Nitric oxide synthase, inducible (NOS type II) (Inducible NO synthase) (Inducible NOS) (iNOS) Source RGD Symbol Acc 1598227
F01	SBR1196961	ENSRNOT00000 067176.4	Oas1a	ENSRNOG00 000001369	2 -5 oligoadenylate synthetase 1A Source RGD Symbol Acc 621760
F02	SBR1212788	ENSRNOT00000 075234.2	Oas1b	ENSRNOG00 000033220	2 -5 oligoadenylate synthetase 1K Source RGD Symbol Acc 1359279
F03	SBR1206173	ENSRNOT00000 077542.1	Oas2	ENSRNOG00 000049282	2 -5 oligoadenylate synthetase 2 Source RGD Symbol Acc 1359697
F04	SBR1101886	ENSRNOT00000 043434.6	Pml	ENSRNOG00 000008400	promyelocytic leukemia Source RGD Symbol Acc 1562602
F05	SBR1208170	ENSRNOT00000 021285.6	Prkcz	ENSRNOG00 000015480	protein kinase C, zeta Source RGD Symbol Acc 3399
F06	SBR1108902	ENSRNOT00000 026279.7	Psme2	ENSRNOG00 000019246	proteasome activator subunit 2 Source RGD Symbol Acc 3430
F07	SBR1122964	ENSRNOT00000 036900.4	RT1-Ha	ENSRNOG00 000026669	RT1 class II, locus Ha Source RGD Symbol Acc 1595921
F08	SBR1142611	ENSRNOT00000 050246.4	AC120486.5	ENSRNOG00 000054295	
F09	SBR1185614	ENSRNOT00000 000990.5	RT1-M3-1	ENSRNOG00 000000763	RT1 class Ib, locus M3, gene 1 Source RGD Symbol Acc 3494
F10	SBR1151212	ENSRNOT00000 083421.1	Slc11a1	ENSRNOG00 000014956	solute carrier family 11 member 1 Source RGD Symbol Acc 1601463

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1119822	ENSRNOT00000003458.3	Socs1	ENSRNOG0000002568	suppressor of cytokine signaling 1 Source RGD Symbol Acc 69272
F12	SBR1122482	ENSRNOT00000034152.6	Sp100	ENSRNOG0000022769	SP100 nuclear antigen Source RGD Symbol Acc 1359550
G01	SBR1199428	ENSRNOT00000080522.1	Stat1	ENSRNOG0000014079	signal transducer and activator of transcription 4 Source RGD Symbol Acc 1305747
G02	SBR1094837	ENSRNOT00000088201.1	Stat2	ENSRNOG0000031081	signal transducer and activator of transcription 2 Source RGD Symbol Acc 1311649
G03	SBR1138417	ENSRNOT00000026760.4	Stat3	ENSRNOG0000019742	signal transducer and activator of transcription 3 Source RGD Symbol Acc 3772
G04	SBR1103040	ENSRNOT00000000529.6	Tap1	ENSRNOG0000000457	transporter 1, ATP binding cassette subfamily B member Source RGD Symbol Acc 3817
G05	SBR1154276	ENSRNOT00000013745.7	Timp1	ENSRNOG0000010208	TIMP metallopeptidase inhibitor 1 Source RGD Symbol Acc 621675
G06	SBR1119614	ENSRNOT00000035781.5	Tlr3	ENSRNOG0000021726	toll-like receptor 3 Source RGD Symbol Acc 735171
G07	SBR1144425	ENSRNOT00000005620.6	Tlr7	ENSRNOG0000004249	toll-like receptor 7 Source RGD Symbol Acc 1563357
G08	SBR1143539	ENSRNOT00000074194.1	Tlr9	ENSRNOG0000048161	toll-like receptor 9 Source RGD Symbol Acc 631352
G09	SBR1107258	ENSRNOT00000017758.5	Tnfsf10	ENSRNOG0000013269	TNF superfamily member 10 Source RGD Symbol Acc 628734
G10	SBR1135297	ENSRNOT00000010906.6	Traf3	ENSRNOG0000008145	Tnf receptor-associated factor 3 Source RGD Symbol Acc 1304633
G11	SBR1201909	ENSRNOT00000041678.5	Tyk2	ENSRNOG0000032948	tyrosine kinase 2 Source RGD Symbol Acc 2320469
G12	SBR1108862	ENSRNOT00000044163.4	Vegfa	ENSRNOG0000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
H01	SBR1220567	ENSRNOT00000042459.4	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	SBR1220568	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	SBR1225377	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	SBR1122313	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	SBR1220572	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	SBR1218555	Sybr_RGDC	RGDC	Sybr_RGDC	Rat 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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