

# QuantiNova® LNA® PCR Focus Panels (Rotor-Gene® Format)

## Rat Innate & Adaptive Immune Responses

Cat. no. 249950 SBRN-052ZR

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 (Rotor-Gene): QuantiNova LNA PCR Focus Panel

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc® (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance. 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	Apics	C3	C5ar1	Cmp	Casp1	Casp8	Ccl12	Ccl3	Ccl5	Ccr4	Ccr5	Ccr6
B	Ccr8	Cd14	Cd1d1	Cd4	Cd40	Cd40lg	Cd80	Cd86	Cd8a	Crp	Csf2	Cxcl10
C	Cxcr3	Ddx58	Faslg	Foxp3	Gata3	Icam1	Ifna5	Ifnar1	Ifnb1	Ifng	Ifngr1	Il10
D	Il13	Il18	Il1a	Il1b	Il1r1	Il2	Il23a	Il4	Il5	Il6	Irak1	Irf3
E	Irf7	Itgod	Jak2	Jun	Lbp	Lyz2	Mapk1	Mapk14	Mapk3	Mapk8	AABR0700669 1.1	Mpo
F	Mx2	Myd88	Nfkbia	Nfkbia	Nlrp3	Nod2	Rag1	Rorc	Slc11a1	Stat5a	Stat3	Stat1
G	Stat6	Tbx21	Tir1	Tir2	Tir3	Tir4	Tir5	Tir6	Tir7	Tir9	LOC1036943 80	Traf6
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	SBR1142966	ENSRNOT00000 012092.6	ApcS	ENSRNOG00 000009086	amyloid P component, serum Source RGD Symbol Acc 68322
A02	SBR1177146	ENSRNOT00000 073042.3	C3	ENSRNOG00 000046834	complement C3 Source RGD Symbol Acc 2232
A03	SBR1123773	ENSRNOT00000 073034.2	C5ar1	ENSRNOG00 000047800	complement C5a receptor 1 Source RGD Symbol Acc 70553
A04	SBR1132040	ENSRNOT00000 028130.7	Camp	ENSRNOG00 000020733	cathelicidin antimicrobial peptide Source RGD Symbol Acc 1559878
A05	SBR1122190	ENSRNOT00000 009993.6	Casp1	ENSRNOG00 000007372	caspase 1 Source RGD Symbol Acc 2274
A06	SBR1182801	ENSRNOT00000 016613.4	Casp8	ENSRNOG00 000012331	caspase 8 Source RGD Symbol Acc 620945
A07	SBR1129555	ENSRNOT00000 031626.5	Ccl12	ENSRNOG00 000029768	chemokine (C-C motif) ligand 12 Source RGD Symbol Acc 1309255
A08	SBR1146662	ENSRNOT00000 015139.3	Cd3	ENSRNOG00 000011205	C-C motif chemokine ligand 3 Source RGD Symbol Acc 3647
A09	SBR1094349	ENSRNOT00000 014865.6	Cd5	ENSRNOG00 000010906	C-C motif chemokine ligand 5 Source RGD Symbol Acc 69069
A10	SBR1113127	ENSRNOT00000 013705.3	Ccr4	ENSRNOG00 000010315	C-C motif chemokine receptor 4 Source RGD Symbol Acc 620594
A11	SBR1129600	ENSRNOT00000 082774.1	Ccr5	ENSRNOG00 000049115	C-C motif chemokine receptor 5 Source RGD Symbol Acc 620596
A12	SBR1172047	ENSRNOT00000 017302.6	Ccr6	ENSRNOG00 000012964	C-C motif chemokine receptor 6 Source RGD Symbol Acc 1308562
B01	SBR1138241	ENSRNOT00000 029766.1	Ccr8	ENSRNOG00 000026759	C-C motif chemokine receptor 8 Source RGD Symbol Acc 1304893
B02	SBR1200939	ENSRNOT00000 023977.6	Cd14	ENSRNOG00 000017819	CD14 molecule Source RGD Symbol Acc 620588
B03	SBR1105922	ENSRNOT00000 022150.2	Cd1d1	ENSRNOG00 000016451	CD1d1 molecule Source RGD Symbol Acc 2296
B04	SBR1197766	ENSRNOT00000 021915.2	Cd4	ENSRNOG00 000016294	Cd4 molecule Source RGD Symbol Acc 2306
B05	SBR1146998	ENSRNOT00000 055148.4	Cd40	ENSRNOG00 000018488	CD40 molecule Source RGD Symbol Acc 619830
B06	SBR1110042	ENSRNOT00000 001162.4	Cd40lg	ENSRNOG00 000000871	CD40 ligand Source RGD Symbol Acc 708418
B07	SBR1120788	ENSRNOT00000 089625.1	Cd80	ENSRNOG00 000001527	Cd80 molecule Source RGD Symbol Acc 2314
B08	SBR1154524	ENSRNOT00000 003129.6	Cd86	ENSRNOG00 000038835	CD86 molecule Source RGD Symbol Acc 628714
B09	SBR1107267	ENSRNOT00000 009515.4	Cd8a	ENSRNOG00 000007178	CD8a molecule Source RGD Symbol Acc 2316
B10	SBR1169897	ENSRNOT00000 000058.6	Crp	ENSRNOG00 000000053	C-reactive protein Source RGD Symbol Acc 2411
B11	SBR1136894	ENSRNOT00000 032333.3	Csf2	ENSRNOG00 000026805	colony stimulating factor 2 Source RGD Symbol Acc 621065
B12	SBR1153857	ENSRNOT00000 003075.7	Cxcl10	ENSRNOG00 000022256	C-X-C motif chemokine ligand 10 Source RGD Symbol Acc 620209
C01	SBR1150044	ENSRNOT00000 076210.1	Cxcr3	ENSRNOG00 000003305	C-X-C motif chemokine receptor 3 Source RGD Symbol Acc 621528
C02	SBR1151012	ENSRNOT00000 060765.4	Ddx58	ENSRNOG00 000006384	DEXD/H-box helicase 58 Source RGD Symbol Acc 1309460
C03	SBR1097457	ENSRNOT00000 003998.2	Faslg	ENSRNOG00 000002978	Fas ligand Source RGD Symbol Acc 3880
C04	SBR1152159	ENSRNOT00000 091146.1	Foxp3	ENSRNOG00 000011702	forkhead box P3 Source RGD Symbol Acc 1562112
C05	SBR1158985	ENSRNOT00000 026187.5	Gata3	ENSRNOG00 000019336	GATA binding protein 3 Source RGD Symbol Acc 621250
C06	SBR1152534	ENSRNOT00000 028066.5	Icam1	ENSRNOG00 000020679	intercellular adhesion molecule 1 Source RGD Symbol Acc 2857
C07	SBR1208793	ENSRNOT00000 049705.1	Ifna5	ENSRNOG00 000031046	interferon, alpha 5 Source RGD Symbol Acc 1359312
C08	SBR1218537	ENSRNOT00000 091472.1	Ifnar1	ENSRNOG00 000028594	interferon alpha and beta receptor subunit 1 Source RGD Symbol Acc 1305399
C09	SBR1104910	ENSRNOT00000 008224.2	Ifnb1	ENSRNOG00 000006268	interferon beta 1 Source RGD Symbol Acc 2865
C10	SBR1108917	ENSRNOT00000 009919.2	Ifng	ENSRNOG00 000007468	interferon gamma Source RGD Symbol Acc 2866
		ENSRNOT00000		ENSRNOG00	

<b>Position</b>	<b>Assay</b>	<b>Name</b>	<b>Symbol</b>	<b>Ensembl ID</b>	<b>Description</b>
C11	SBR1116085	016286.6	Ifngrl	000012074	interferon gamma receptor 1 Source RGD Symbol Acc 620570
C12	SBR1123238	ENSRNOT00000 006246.5	Il10	ENSRNOG00 000004647	interleukin 10 Source RGD Symbol Acc 2886
D01	SBR1178777	ENSRNOT00000 010121.2	Il13	ENSRNOG00 000007652	interleukin 13 Source RGD Symbol Acc 68949
D02	SBR1183288	ENSRNOT00000 013093.6	Il18	ENSRNOG00 000009848	interleukin 18 Source RGD Symbol Acc 2889
D03	SBR1106125	ENSRNOT00000 006113.8	Il1a	ENSRNOG00 000004575	interleukin 1 alpha Source RGD Symbol Acc 2890
D04	SBR1196387	ENSRNOT00000 006308.4	Il1b	ENSRNOG00 000004649	interleukin 1 beta Source RGD Symbol Acc 2891
D05	SBR1113457	ENSRNOT00000 019673.4	Il1r1	ENSRNOG00 000014504	interleukin 1 receptor type 1 Source RGD Symbol Acc 2892
D06	SBR1102170	ENSRNOT00000 023327.2	Il2	ENSRNOG00 000017348	interleukin 2 Source RGD Symbol Acc 620047
D07	SBR1176508	ENSRNOT00000 004363.3	Il23a	ENSRNOG00 000003254	interleukin 23 subunit alpha Source RGD Symbol Acc 620873
D08	SBR1101847	ENSRNOT00000 010029.3	Il4	ENSRNOG00 000007624	interleukin 4 Source RGD Symbol Acc 2898
D09	SBR1179555	ENSRNOT00000 010729.4	Il5	ENSRNOG00 000008111	interleukin 5 Source RGD Symbol Acc 2900
D10	SBR1156877	ENSRNOT00000 013732.6	Il6	ENSRNOG00 000010278	interleukin 6 Source RGD Symbol Acc 2901
D11	SBR1200697	ENSRNOT00000 092207.1	Ikra1	ENSRNOG00 000060869	interleukin-1 receptor-associated kinase 1 Source RGD Symbol Acc 1563841
D12	SBR1201960	ENSRNOT00000 027786.6	Irf3	ENSRNOG00 000043388	interferon regulatory factor 3 Source RGD Symbol Acc 1549774
E01	SBR1141330	ENSRNOT00000 023504.6	Irf7	ENSRNOG00 000017414	interferon regulatory factor 7 Source RGD Symbol Acc 1307828
E02	SBR1114389	ENSRNOT00000 086003.1	Itgad	ENSRNOG00 000019728	integrin subunit alpha M Source RGD Symbol Acc 2926
E03	SBR1191640	ENSRNOT00000 087011.1	Jak2	ENSRNOG00 000059968	Janus kinase 2 Source RGD Symbol Acc 2939
E04	SBR1133226	ENSRNOT00000 011731.3	Jun	ENSRNOG00 000026293	Jun proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2943
E05	SBR1203438	ENSRNOT00000 019787.2	Lbp	ENSRNOG00 000014532	lipopolysaccharide binding protein Source RGD Symbol Acc 61865
E06	SBR1132120	ENSRNOT00000 007747.7	Lyz2	ENSRNOG00 000005825	lysozyme 2 Source RGD Symbol Acc 3026
E07	SBR1202944	ENSRNOT00000 002533.7	Mapk1	ENSRNOG00 000001849	mitogen activated protein kinase 1 Source RGD Symbol Acc 70500
E08	SBR1149566	ENSRNOT00000 000618.6	Mapk14	ENSRNOG00 000000513	mitogen activated protein kinase 14 Source RGD Symbol Acc 70496
E09	SBR1209281	ENSRNOT00000 087625.1	Mapk3	ENSRNOG00 000053583	mitogen activated protein kinase 3 Source RGD Symbol Acc 3046
E10	SBR1144517	ENSRNOT00000 065216.3	Mapk8	ENSRNOG00 000020155	mitogen-activated protein kinase 8 Source RGD Symbol Acc 621506
E11	SBR1147809	ENSRNOT00000 050984.5	AABR0700	ENSRNOG00 000011637	
E12	SBR1165540	ENSRNOT00000 081951.1	Mpo	ENSRNOG00 000008310	myeloperoxidase Source RGD Symbol Acc 1592081
F01	SBR1154254	ENSRNOT00000 002695.5	Mx2	ENSRNOG00 000001963	MX dynamin like GTPase 2 Source RGD Symbol Acc 628821
F02	SBR1185632	ENSRNOT00000 018341.5	Myd88	ENSRNOG00 000013634	MYD88, innate immune signal transduction adaptor Source RGD Symbol Acc 735043
F03	SBR1111134	ENSRNOT00000 036838.4	Nfkb1	ENSRNOG00 000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
F04	SBR1120974	ENSRNOT00000 009894.6	Nfkbia	ENSRNOG00 000007390	NFKB inhibitor alpha Source RGD Symbol Acc 3171
F05	SBR1186072	ENSRNOT00000 004280.5	Nlrp3	ENSRNOG00 000003170	NLR family, pyrin domain containing 3 Source RGD Symbol Acc 1308314
F06	SBR1140577	ENSRNOT00000 065103.2	Nod2	ENSRNOG00 000014124	nucleotide-binding oligomerization domain containing 2 Source RGD Symbol Acc 1306368
F07	SBR1126866	ENSRNOT00000 006115.5	Rag1	ENSRNOG00 000004630	recombination activating 1 Source RGD Symbol Acc 619790
F08	SBR1114012	ENSRNOT00000 067042.3	Rorc	ENSRNOG00 000020836	RAR-related orphan receptor C Source RGD Symbol Acc 1595785
F09	SBR1151212	ENSRNOT00000 083421.1	Slc11a1	ENSRNOG00 000014956	solute carrier family 11 member 1 Source RGD Symbol Acc 1601463
F10	SBR1147063	ENSRNOT00000 026662.3	Stat5a	ENSRNOG00 000019496	signal transducer and activator of transcription 5A Source RGD Symbol Acc 3773

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1138417	ENSRNOT00000 026760.4	Stat3	ENSRNOG00 000019742	signal transducer and activator of transcription 3 Source RGD Symbol Acc 3772
F12	SBR1199428	ENSRNOT00000 080522.1	Stat1	ENSRNOG00 000014079	signal transducer and activator of transcription 4 Source RGD Symbol Acc 1305747
G01	SBR1207811	ENSRNOT00000 085350.1	Stat6	ENSRNOG00 000025023	signal transducer and activator of transcription 6 Source RGD Symbol Acc 1309063
G02	SBR1137931	ENSRNOT00000 012538.5	Tbx21	ENSRNOG00 000009427	T-box 21 Source RGD Symbol Acc 1308264
G03	SBR1137224	ENSRNOT00000 059124.3	Tlr1	ENSRNOG00 000038722	toll-like receptor 1 Source MGI Symbol Acc MGI 1341295
G04	SBR1126190	ENSRNOT00000 013025.4	Tlr2	ENSRNOG00 000009822	toll-like receptor 2 Source RGD Symbol Acc 735138
G05	SBR1119614	ENSRNOT00000 035781.5	Tlr3	ENSRNOG00 000021726	toll-like receptor 3 Source RGD Symbol Acc 735171
G06	SBR1180108	ENSRNOT00000 014020.3	Tlr4	ENSRNOG00 000010522	toll-like receptor 4 Source RGD Symbol Acc 3870
G07	SBR1140816	ENSRNOT00000 004821.4	Tlr5	ENSRNOG00 00002067	toll-like receptor 5 Source RGD Symbol Acc 631351
G08	SBR1133670	ENSRNOT00000 002933.5	Tlr6	ENSRNOG00 000002161	toll-like receptor 6 Source RGD Symbol Acc 1303030
G09	SBR1144425	ENSRNOT00000 005620.6	Tlr7	ENSRNOG00 000004249	toll-like receptor 7 Source RGD Symbol Acc 1563357
G10	SBR1143539	ENSRNOT00000 074194.1	Tlr9	ENSRNOG00 000048161	toll-like receptor 9 Source RGD Symbol Acc 631352
G11	SBR1187845	ENSRNOT00000 079677.1	LOC10369 4380	ENSRNOG00 000055156	tumor necrosis factor-like Source RGD Symbol Acc 9404643
G12	SBR1200335	ENSRNOT00000 006148.5	Traf6	ENSRNOG00 000004639	TNF receptor associated factor 6 Source RGD Symbol Acc 1306853
H01	SBR1220567	ENSRNOT00000 042459.4	Actb	ENSRNOG00 000034254	actin, beta Source RGD Symbol Acc 628837
H02	SBR1220568	ENSRNOT00000 023017.5	B2m	ENSRNOG00 000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	SBR1225377	ENSRNOT00000 065935.3	Hprt1	ENSRNOG00 000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	SBR1122313	ENSRNOT00000 017468.2	Ldha	ENSRNOG00 000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	SBR1220572	ENSRNOT00000 018820.5	Rplp1	ENSRNOG00 000013874	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 µl reactions: 20 µl 8x gDNA Removal Mix, 10 µl Reverse Transcription Enzyme, 40 µl Reverse Transcription Mix (containing RT primers), 20 µl Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 µl QuantiNova SYBR Green RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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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