

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

## Rat JAK / STAT Signaling Pathway

Cat. no. 249950 SBRN-039ZR

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	LOC1009115 45	Akt1	Bcl2l1	Ccnd1	Cdkn1a	Cebpb	Cebpd	Crk	Crp	Csf1r	Cxcl9	Egfr
B	Epor	F2	Fas	Fcer2	Fcgr1a	Gata3	Gbp4	Ghr	Grb2	Ifnar1	Ifng	Ifngr1
C	Il10ra	Il10rb	Il20	Il2ra	Il2rg	Il4	Il4r	Il6st	Insr	Irf1	Irf9	Isg15
D	Jak1	Jak2	Jak3	Jun	Junb	Lig1	Oas1a	Mpl	Myc	Nrkb1	Nos2	AABR0703175 6.1
E	Osm	Pdgfra	Pias1	Pias2	Plf	Prlr	Ptgn1	Ptgn1.1	Ptprc	Sh2b1	Sirpa	Smad1
F	Smad2	Smad3	Smad4	Smad5	Socs1	Socs2	Socs3	Socs4	Socs5	Sp1	Spi1	Src
G	Stat4	Hnf4a	Stat2	Stat3	Stat1	Stat5a	Stat5b	Stat6	Stat1	Tyk2	Usf1	Yy1
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	SBR1166452	ENSRNOT00000019346.6	LOC100911545	ENSRNOG0000028896	alpha-2-macroglobulin-like Source RGD Symbol Acc 6492449
A02	SBR1163078	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A03	SBR1205791	ENSRNOT00000010762.7	Bcl2l1	ENSRNOG0000007946	Bcl2-like 1 Source RGD Symbol Acc 2200
A04	SBR1211432	ENSRNOT00000028411.3	Ccnd1	ENSRNOG0000020918	cyclin D1 Source RGD Symbol Acc 68384
A05	SBR1145142	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
A06	SBR1114232	ENSRNOT00000083876.1	Cebpb	ENSRNOG0000057347	CCAAT/enhancer binding protein beta Source RGD Symbol Acc 2327
A07	SBR1129981	ENSRNOT00000074586.2	Cebpd	ENSRNOG0000050869	CCAAT/enhancer binding protein delta Source RGD Symbol Acc 2328
A08	SBR1123117	ENSRNOT00000006407.4	Crk	ENSRNOG0000025792	CRK proto-oncogene, adaptor protein Source RGD Symbol Acc 2405
A09	SBR1169897	ENSRNOT00000000058.6	Crp	ENSRNOG0000000053	C-reactive protein Source RGD Symbol Acc 2411
A10	SBR1118668	ENSRNOT00000049357.4	Csf1r	ENSRNOG0000018414	colony stimulating factor 1 receptor Source RGD Symbol Acc 2425
A11	SBR1174753	ENSRNOT00000003082.7	Cxcl9	ENSRNOG0000022242	C-X-C motif chemokine ligand 9 Source RGD Symbol Acc 628798
A12	SBR1196436	ENSRNOT00000006087.2	Egfr	ENSRNOG0000004332	epidermal growth factor receptor Source RGD Symbol Acc 2543
B01	SBR1160856	ENSRNOT00000017369.4	Epor	ENSRNOG0000012619	erythropoietin receptor Source RGD Symbol Acc 2560
B02	SBR1146218	ENSRNOT00000022233.5	F2	ENSRNOG0000016325	coagulation factor II Source RGD Symbol Acc 61996
B03	SBR1159525	ENSRNOT00000025928.5	Fas	ENSRNOG0000019142	Fas cell surface death receptor Source RGD Symbol Acc 619831
B04	SBR1202953	ENSRNOT00000001332.6	Fcer2	ENSRNOG0000001005	Fc fragment of IgE receptor II Source RGD Symbol Acc 619997
B05	SBR1161283	ENSRNOT00000082450.1	Fcgr1a	ENSRNOG0000021199	Fc fragment of IgG receptor Ia Source RGD Symbol Acc 1309912
B06	SBR1158985	ENSRNOT00000026187.5	Gata3	ENSRNOG0000019336	GATA binding protein 3 Source RGD Symbol Acc 621250
B07	SBR1128270	ENSRNOT00000022648.5	Gbp4	ENSRNOG0000028768	guanylate binding protein 4 Source RGD Symbol Acc 1310579
B08	SBR1131686	ENSRNOT00000021081.6	Ghr	ENSRNOG0000015654	growth hormone receptor Source RGD Symbol Acc 2687
B09	SBR1181692	ENSRNOT00000005347.5	Grb2	ENSRNOG0000003990	growth factor receptor bound protein 2 Source RGD Symbol Acc 619758
B10	SBR1218537	ENSRNOT00000091472.1	Ifnar1	ENSRNOG0000028594	interferon alpha and beta receptor subunit 1 Source RGD Symbol Acc 1305399
B11	SBR1108917	ENSRNOT00000009919.2	Ifng	ENSRNOG0000007468	interferon gamma Source RGD Symbol Acc 2866
B12	SBR1116085	ENSRNOT00000016286.6	Ifngr1	ENSRNOG0000012074	interferon gamma receptor 1 Source RGD Symbol Acc 620570
C01	SBR1193747	ENSRNOT00000021926.4	Il10ra	ENSRNOG0000016308	interleukin 10 receptor subunit alpha Source RGD Symbol Acc 620138
C02	SBR1173195	ENSRNOT000000061345.3	Il10rb	ENSRNOG0000028638	interleukin 10 receptor subunit beta Source RGD Symbol Acc 1560373
C03	SBR1170660	ENSRNOT000000067006.2	Il20	ENSRNOG0000004633	interleukin 20 Source RGD Symbol Acc 1583578
C04	SBR1164904	ENSRNOT00000073144.2	Il2ra	ENSRNOG0000047647	interleukin 2 receptor subunit alpha Source RGD Symbol Acc 2895
C05	SBR1104761	ENSRNOT00000077024.1	Il2rg	ENSRNOG0000003954	interleukin 2 receptor subunit gamma Source RGD Symbol Acc 621466
C06	SBR1101847	ENSRNOT00000010029.3	Il4	ENSRNOG0000007624	interleukin 4 Source RGD Symbol Acc 2898
C07	SBR1170720	ENSRNOT00000020994.5	Il4r	ENSRNOG0000015441	interleukin 4 receptor Source RGD Symbol Acc 2899
C08	SBR1177389	ENSRNOT00000018877.7	Il6st	ENSRNOG0000013963	interleukin 6 signal transducer Source RGD Symbol Acc 2903
C09	SBR1131460	ENSRNOT00000041155.3	Insr	ENSRNOG0000029986	insulin receptor Source RGD Symbol Acc 2917
C10	SBR1170657	ENSRNOT00000010968.6	Irf1	ENSRNOG0000008144	interferon regulatory factor 1 Source RGD Symbol Acc 2920
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1196772	026364.4	Irf9	000019478	interferon regulatory factor 9 Source RGD Symbol Acc 1308766
C12	SBR1121179	ENSRNOT00000039263.5	Isg15	ENSRNOG0000021802	ISG15 ubiquitin-like modifier Source RGD Symbol Acc 1310312
D01	SBR1138663	ENSRNOT00000064542.1	Jak1	ENSRNOG0000011157	Janus kinase 1 Source RGD Symbol Acc 69056
D02	SBR1191640	ENSRNOT00000087011.1	Jak2	ENSRNOG0000059968	Janus kinase 2 Source RGD Symbol Acc 2939
D03	SBR1203719	ENSRNOT00000080146.1	Jak3	ENSRNOG0000018669	Janus kinase 3 Source RGD Symbol Acc 2940
D04	SBR1133226	ENSRNOT00000011731.3	Jun	ENSRNOG0000026293	Jun proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2943
D05	SBR1195750	ENSRNOT00000067780.3	Junb	ENSRNOG0000042838	JunB proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2944
D06	SBR1187919	ENSRNOT00000074993.2	Lrg1	ENSRNOG0000049918	leucine-rich alpha-2-glycoprotein 1 Source RGD Symbol Acc 1359464
D07	SBR1196961	ENSRNOT00000067176.4	Oas1a	ENSRNOG0000001369	2'-5' oligoadenylate synthetase 1A Source RGD Symbol Acc 621760
D08	SBR1130037	ENSRNOT00000093301.1	Mpl	ENSRNOG0000028377	MPL proto-oncogene, thrombopoietin receptor Source RGD Symbol Acc 1311069
D09	SBR1106364	ENSRNOT00000006188.5	Myc	ENSRNOG0000004500	MYC proto-oncogene, bHLH transcription factor Source RGD Symbol Acc 3130
D10	SBR1111134	ENSRNOT00000036838.4	Nfkb1	ENSRNOG0000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
D11	SBR1197401	ENSRNOT00000073138.2	Nos2	ENSRNOG0000057443	similar to Nitric oxide synthase, inducible (NOS type II) (Inducible NO synthase) (Inducible NOS) (iNOS) Source RGD Symbol Acc 1598227
D12	SBR1127733	ENSRNOT00000044287.4	AABR07031756.1	ENSRNOG0000014096	nuclear receptor subfamily 3, group C, member 1 Source NCBI gene Acc 24413
E01	SBR1214264	ENSRNOT00000035591.3	Osm	ENSRNOG0000024390	oncostatin M Source RGD Symbol Acc 1585012
E02	SBR1195557	ENSRNOT00000003077.5	Pdgfra	ENSRNOG0000002244	platelet derived growth factor receptor alpha Source RGD Symbol Acc 3284
E03	SBR1181406	ENSRNOT00000066009.1	Pias1	ENSRNOG0000034272	protein inhibitor of activated STAT, 1 Source RGD Symbol Acc 1307843
E04	SBR1185967	ENSRNOT00000023886.5	Pias2	ENSRNOG0000017493	protein inhibitor of activated STAT, 2 Source RGD Symbol Acc 71056
E05	SBR1190561	ENSRNOT00000023412.4	Prl	ENSRNOG0000017374	prolactin Source RGD Symbol Acc 3403
E06	SBR1155849	ENSRNOT00000084624.1	Prlr	ENSRNOG0000057557	prolactin receptor Source RGD Symbol Acc 3407
E07	SBR1146496	ENSRNOT00000014309.4	Ptfn1	ENSRNOG0000010574	protein tyrosine phosphatase, non-receptor type 1 Source RGD Symbol Acc 61965
E08	SBR1164134	ENSRNOT00000046323.5	Ptfn11	ENSRNOG0000030124	protein tyrosine phosphatase, non-receptor type 11 Source RGD Symbol Acc 3447
E09	SBR1159554	ENSRNOT00000064785.3	Ptprc	ENSRNOG0000000655	protein tyrosine phosphatase, receptor type, C Source RGD Symbol Acc 3451
E10	SBR1105698	ENSRNOT00000074274.2	Sh2b1	ENSRNOG0000049181	SH2B adaptor protein 1 Source RGD Symbol Acc 620132
E11	SBR1131431	ENSRNOT00000006408.6	Sirpa	ENSRNOG0000004763	signal-regulatory protein alpha Source RGD Symbol Acc 3449
E12	SBR1104338	ENSRNOT00000025079.6	Smad1	ENSRNOG0000018483	SMAD family member 1 Source RGD Symbol Acc 3030
F01	SBR1164397	ENSRNOT00000046847.4	Smad2	ENSRNOG0000018140	SMAD family member 2 Source RGD Symbol Acc 3031
F02	SBR1096995	ENSRNOT00000039730.4	Smad3	ENSRNOG0000008620	SMAD family member 3 Source RGD Symbol Acc 3032
F03	SBR1183988	ENSRNOT00000090198.1	Smad4	ENSRNOG0000051965	SMAD family member 4 Source RGD Symbol Acc 3033
F04	SBR1104889	ENSRNOT00000016704.4	Smad5	ENSRNOG0000022870	SMAD family member 5 Source RGD Symbol Acc 620158
F05	SBR1119822	ENSRNOT00000003458.3	Socs1	ENSRNOG000002568	suppressor of cytokine signaling 1 Source RGD Symbol Acc 69272
F06	SBR1141796	ENSRNOT00000011948.4	Socs2	ENSRNOG0000008965	suppressor of cytokine signaling 2 Source NCBI gene Acc 84607
F07	SBR1139184	ENSRNOT00000003940.3	Socs3	ENSRNOG0000002946	suppressor of cytokine signaling 3 Source RGD Symbol Acc 621087
F08	SBR1159059	ENSRNOT00000015120.6	Socs4	ENSRNOG0000011377	suppressor of cytokine signaling 4 Source RGD Symbol Acc 1306503
F09	SBR1213299	ENSRNOT00000020337.4	Socs5	ENSRNOG0000028504	suppressor of cytokine signaling 5 Source RGD Symbol Acc 1564914
F10	SBR1200819	ENSRNOT00000019403.6	Sp1	ENSRNOG0000014084	Sp1 transcription factor Source RGD Symbol Acc 3738

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1178314	ENSRNOT00000016306.6	Spi1	ENSRNOG0000012172	Spi-1 proto-oncogene Source RGD Symbol Acc 1359607
F12	SBR1192294	ENSRNOT00000012739.4	Src	ENSRNOG0000009495	SRC proto-oncogene, non-receptor tyrosine kinase Source RGD Symbol Acc 620795
G01	SBR1176252	ENSRNOT00000077368.1	Stam	ENSRNOG0000060817	signal transducing adaptor molecule Source RGD Symbol Acc 1564499
G02	SBR1193762	ENSRNOT00000089893.1	Hnf4a	ENSRNOG0000008895	hepatocyte nuclear factor 4, alpha Source RGD Symbol Acc 2810
G03	SBR1094837	ENSRNOT00000088201.1	Stat2	ENSRNOG0000031081	signal transducer and activator of transcription 2 Source RGD Symbol Acc 1311649
G04	SBR1138417	ENSRNOT00000026760.4	Stat3	ENSRNOG0000019742	signal transducer and activator of transcription 3 Source RGD Symbol Acc 3772
G05	SBR1199428	ENSRNOT00000080522.1	Stat1	ENSRNOG0000014079	signal transducer and activator of transcription 4 Source RGD Symbol Acc 1305747
G06	SBR1147063	ENSRNOT00000026662.3	Stat5a	ENSRNOG0000019496	signal transducer and activator of transcription 5A Source RGD Symbol Acc 3773
G07	SBR1101487	ENSRNOT00000081247.1	Stat5b	ENSRNOG0000019075	signal transducer and activator of transcription 5B Source RGD Symbol Acc 3774
G08	SBR1207811	ENSRNOT00000085350.1	Stat6	ENSRNOG0000025023	signal transducer and activator of transcription 6 Source RGD Symbol Acc 1309063
G09	SBR1163016	ENSRNOT00000026921.6	Stub1	ENSRNOG0000019798	STIP1 homology and U-box containing protein 1 Source RGD Symbol Acc 1306167
G10	SBR1201909	ENSRNOT00000041678.5	Tyk2	ENSRNOG0000032948	tyrosine kinase 2 Source RGD Symbol Acc 2320469
G11	SBR1103195	ENSRNOT00000005811.4	Usf1	ENSRNOG0000004255	upstream transcription factor 1 Source RGD Symbol Acc 620974
G12	SBR1180925	ENSRNOT00000005743.3	Yy1	ENSRNOG0000004339	YY1 transcription factor Source RGD Symbol Acc 3982
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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