

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

## Rat Signal Transduction PathwayFinder™, 96

Cat. no. 249950 SBRN-014ZR

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
<b>A</b>	Acsl3	Acsl4	Acsl5	Adm	Arnt	Aif4	Axin2	Bax	Pmaip1	Bcl2	Bcl2a1	Bcl2l1
<b>B</b>	Birc3	Bmp2	Bmp4	Btg2	Car9	Ccl5	Ccnd1	Ccnd2	Cdkn1a	Cdkn1b	Cebpd	Cpt2
<b>C</b>	Csf1	Dab2	Egfr	Emp1	Epo	Fabp1	Fas	Fcer2	Fosl1	Fth1	Gadd45a	Gadd45b
<b>D</b>	Gata3	Gclc	Gclm	Gsr	Herpud1	Hes1	Hes5	Hey1	Hey2	Heyl	Hmox1	Icam1
<b>E</b>	Id1	Ifng	Ifrd1	Irf1	Jag1	Pgk1	Lfng	Lrg1	Crp	Mmp7	Myc	Notch1
<b>F</b>	Nqa1	Olr1	Pcna	Ppard	Ptch1	Rb1	Serpine1	Slc27a4	Slc2a1	Socs3	Sorbs1	Sqstm1
<b>G</b>	Stat1	LOC1036943 80	Tnfrsf10	Txn1	Txnrd1	Vegfa	Ccn4	Wnt1	Wnt2b	Wnt3a	Wnt5a	Wnt6
<b>H</b>	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	SBR1174444	ENSRNOT00000020161.2	Acsl3	ENSRNOG0000014718	acyl-CoA synthetase long-chain family member 3 Source RGD Symbol Acc 70552
A02	SBR1194850	ENSRNOT00000026057.6	Acsl4	ENSRNOG0000019180	acyl-CoA synthetase long-chain family member 4 Source RGD Symbol Acc 69401
A03	SBR1205852	ENSRNOT00000022126.6	Acsl5	ENSRNOG0000016265	acyl-CoA synthetase long-chain family member 5 Source RGD Symbol Acc 69402
A04	SBR1135593	ENSRNOT00000036718.1	Adm	ENSRNOG0000027030	adrenomedullin Source RGD Symbol Acc 2047
A05	SBR1145957	ENSRNOT00000091681.1	Arnt	ENSRNOG0000031174	aryl hydrocarbon receptor nuclear translocator Source RGD Symbol Acc 2153
A06	SBR1186510	ENSRNOT00000065304.4	Atf4	ENSRNOG0000017801	activating transcription factor 4 Source RGD Symbol Acc 621863
A07	SBR1121880	ENSRNOT00000088599.1	Axin2	ENSRNOG0000055010	axin 2 Source RGD Symbol Acc 69259
A08	SBR1154566	ENSRNOT00000028328.5	Bax	ENSRNOG0000020876	BCL2 associated X, apoptosis regulator Source RGD Symbol Acc 2192
A09	SBR1112809	ENSRNOT00000025362.3	Pmaip1	ENSRNOG0000018770	phorbol-12-myristate-13-acetate-induced protein 1 Source RGD Symbol Acc 1359266
A10	SBR1170984	ENSRNOT00000003768.2	Bcl2	ENSRNOG0000002791	BCL2, apoptosis regulator Source RGD Symbol Acc 2199
A11	SBR1100092	ENSRNOT00000039850.3	Bcl2a1	ENSRNOG0000047606	BCL2-related protein A1 Source RGD Symbol Acc 620621
A12	SBR1205791	ENSRNOT00000010762.7	Bcl2l1	ENSRNOG0000007946	Bcl2-like 1 Source RGD Symbol Acc 2200
B01	SBR1181460	ENSRNOT00000090774.1	Birc3	ENSRNOG0000005731	baculoviral IAP repeat-containing 3 Source RGD Symbol Acc 621282
B02	SBR1127251	ENSRNOT00000028904.4	Bmp2	ENSRNOG0000021276	bone morphogenetic protein 2 Source RGD Symbol Acc 2211
B03	SBR1132271	ENSRNOT00000012957.6	Bmp4	ENSRNOG0000009694	bone morphogenetic protein 4 Source RGD Symbol Acc 2213
B04	SBR1132920	ENSRNOT00000004408.3	Btg2	ENSRNOG0000003300	BTG anti-proliferation factor 2 Source RGD Symbol Acc 2225
B05	SBR1133743	ENSRNOT00000023060.5	Car9	ENSRNOG0000017073	carbonic anhydrase 9 Source RGD Symbol Acc 1306426
B06	SBR1094349	ENSRNOT00000014865.6	Ccl5	ENSRNOG0000010906	C-C motif chemokine ligand 5 Source RGD Symbol Acc 69069
B07	SBR1211432	ENSRNOT00000028411.3	Ccnd1	ENSRNOG0000020918	cyclin D1 Source RGD Symbol Acc 68384
B08	SBR1095869	ENSRNOT00000086440.1	Ccnd2	ENSRNOG0000057710	cyclin D2 Source RGD Symbol Acc 621083
B09	SBR1145142	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B10	SBR1124365	ENSRNOT00000049848.1	Cdkn1b	ENSRNOG0000007249	cyclin-dependent kinase inhibitor 1B Source RGD Symbol Acc 69062
B11	SBR1129981	ENSRNOT00000074586.2	Cebpd	ENSRNOG0000050869	CCAAT/enhancer binding protein delta Source RGD Symbol Acc 2328
B12	SBR1129520	ENSRNOT00000016954.3	Cpt2	ENSRNOG0000012443	carnitine palmitoyltransferase 2 Source RGD Symbol Acc 2398
C01	SBR1099651	ENSRNOT00000025222.6	Csf1	ENSRNOG0000018659	colony stimulating factor 1 Source RGD Symbol Acc 621063
C02	SBR1170520	ENSRNOT00000050655.5	Dab2	ENSRNOG0000028930	DAB2, clathrin adaptor protein Source RGD Symbol Acc 621007
C03	SBR1196436	ENSRNOT00000006087.2	Egfr	ENSRNOG0000004332	epidermal growth factor receptor Source RGD Symbol Acc 2543
C04	SBR1178747	ENSRNOT00000079785.1	Emp1	ENSRNOG0000008676	epithelial membrane protein 1 Source RGD Symbol Acc 2552
C05	SBR1147729	ENSRNOT00000001914.4	Epo	ENSRNOG0000001412	erythropoietin Source RGD Symbol Acc 2559
C06	SBR1208364	ENSRNOT00000008840.5	Fabp1	ENSRNOG0000006675	fatty acid binding protein 1 Source RGD Symbol Acc 2590
C07	SBR1159525	ENSRNOT00000025928.5	Fas	ENSRNOG0000019142	Fas cell surface death receptor Source RGD Symbol Acc 619831
C08	SBR1202953	ENSRNOT00000001332.6	Fcer2	ENSRNOG0000001005	Fc fragment of IgE receptor II Source RGD Symbol Acc 619997
C09	SBR1182363	ENSRNOT00000027891.2	Fosl1	ENSRNOG0000020552	FOS like 1, AP-1 transcription factor subunit Source RGD Symbol Acc 2627
C10	SBR1160832	ENSRNOT00000030919.5	Fth1	ENSRNOG0000022619	ferritin heavy chain 1 Source RGD Symbol Acc 2635
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1179414	007698.6	Gadd45a	000005615	growth arrest and DNA-damage-inducible, alpha Source RGD Symbol Acc 2654
C12	SBR1101583	ENSRNOT0000026871.4	Gadd45b	ENSRNOG0000019822	growth arrest and DNA-damage-inducible, beta Source RGD Symbol Acc 1309080
D01	SBR1158985	ENSRNOT0000026187.5	Gata3	ENSRNOG0000019336	GATA binding protein 3 Source RGD Symbol Acc 621250
D02	SBR1095943	ENSRNOT0000033196.3	Gclc	ENSRNOG0000006302	glutamate-cysteine ligase, catalytic subunit Source RGD Symbol Acc 619868
D03	SBR1197356	ENSRNOT0000018343.4	Gclm	ENSRNOG0000013409	glutamate cysteine ligase, modifier subunit Source RGD Symbol Acc 619871
D04	SBR1141526	ENSRNOT0000020252.6	Gsr	ENSRNOG0000014915	glutathione-disulfide reductase Source RGD Symbol Acc 621747
D05	SBR1209229	ENSRNOT0000025559.5	Herpud1	ENSRNOG0000018796	homocysteine inducible ER protein with ubiquitin like domain 1 Source RGD Symbol Acc 620818
D06	SBR1103177	ENSRNOT00000202346.7	Hes1	ENSRNOG0000001720	hes family bHLH transcription factor 1 Source RGD Symbol Acc 62081
D07	SBR1154086	ENSRNOT0000018769.2	Hes5	ENSRNOG0000013850	hes family bHLH transcription factor 5 Source RGD Symbol Acc 621340
D08	SBR1112803	ENSRNOT0000015537.7	Hey1	ENSRNOG0000011593	hes-related family bHLH transcription factor with YRPW motif 1 Source NCBI gene Acc 155437
D09	SBR1143993	ENSRNOT0000018718.6	Hey2	ENSRNOG0000013364	hes-related family bHLH transcription factor with YRPW motif 2 Source RGD Symbol Acc 621405
D10	SBR1124485	ENSRNOT0000020929.3	Heyl	ENSRNOG0000015318	hes-related family bHLH transcription factor with YRPW motif-like Source RGD Symbol Acc 1305022
D11	SBR1146734	ENSRNOT0000019192.6	Hmox1	ENSRNOG0000014117	heme oxygenase 1 Source RGD Symbol Acc 2806
D12	SBR1152534	ENSRNOT0000028066.5	Icam1	ENSRNOG0000020679	intercellular adhesion molecule 1 Source RGD Symbol Acc 2857
E01	SBR1135399	ENSRNOT0000029660.5	Id1	ENSRNOG0000021750	inhibitor of DNA binding 1, HLH protein Source RGD Symbol Acc 2858
E02	SBR1108917	ENSRNOT0000009919.2	Iifng	ENSRNOG0000007468	interferon gamma Source RGD Symbol Acc 2866
E03	SBR1098953	ENSRNOT0000073791.1	Iifrd1	ENSRNOG0000050997	interferon-related developmental regulator 1 Source RGD Symbol Acc 2867
E04	SBR1170657	ENSRNOT0000010968.6	Irf1	ENSRNOG0000008144	interferon regulatory factor 1 Source RGD Symbol Acc 2920
E05	SBR1173778	ENSRNOT0000010638.7	Jag1	ENSRNOG0000007443	jagged 1 Source RGD Symbol Acc 2937
E06	SBR1149927	ENSRNOT0000077604.1	Pgk1	ENSRNOG0000058249	phosphoglycerate kinase 1 Source RGD Symbol Acc 619878
E07	SBR1205678	ENSRNOT0000001682.6	Lfng	ENSRNOG000001250	LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase Source RGD Symbol Acc 620587
E08	SBR1187919	ENSRNOT0000074993.2	Lrg1	ENSRNOG0000049918	leucine-rich alpha-2-glycoprotein 1 Source RGD Symbol Acc 1359464
E09	SBR1169897	ENSRNOT0000000058.6	Crp	ENSRNOG0000000053	C-reactive protein Source RGD Symbol Acc 2411
E10	SBR1116320	ENSRNOT0000014041.5	Mmp7	ENSRNOG0000010507	matrix metalloproteinase 7 Source RGD Symbol Acc 3100
E11	SBR1106364	ENSRNOT0000006188.5	Myc	ENSRNOG0000004500	MYC proto-oncogene, bHLH transcription factor Source RGD Symbol Acc 3130
E12	SBR1183596	ENSRNOT0000026212.7	Notch1	ENSRNOG0000019322	notch 1 Source RGD Symbol Acc 3187
F01	SBR1125692	ENSRNOT0000017174.5	Nqo1	ENSRNOG0000012772	NAD(P)H quinone dehydrogenase 1 Source RGD Symbol Acc 2503
F02	SBR1156006	ENSRNOT00000086390.1	Olr1	ENSRNOG0000056219	oxidized low density lipoprotein receptor 1 Source RGD Symbol Acc 620515
F03	SBR1212532	ENSRNOT0000028887.6	Pcna	ENSRNOG0000021264	proliferating cell nuclear antigen Source RGD Symbol Acc 3269
F04	SBR1197924	ENSRNOT0000083109.1	Ppard	ENSRNOG0000000503	peroxisome proliferator-activated receptor delta Source RGD Symbol Acc 3370
F05	SBR1146307	ENSRNOT0000026287.5	Ptch1	ENSRNOG0000019354	patched 1 Source RGD Symbol Acc 621425
F06	SBR1123205	ENSRNOT0000021752.5	Rb1	ENSRNOG0000016029	RB transcriptional corepressor 1 Source RGD Symbol Acc 3540
F07	SBR1126485	ENSRNOT0000001916.2	Serpine1	ENSRNOG0000001414	serpin family E member 1 Source RGD Symbol Acc 3249
F08	SBR1212504	ENSRNOT0000019500.6	Slc27a4	ENSRNOG0000014369	solute carrier family 27 member 4 Source RGD Symbol Acc 1307383
F09	SBR1109042	ENSRNOT00000064452.2	Slc2a1	ENSRNOG0000007284	solute carrier family 2 member 1 Source RGD Symbol Acc 3704
F10	SBR1139184	ENSRNOT0000003940.3	Socs3	ENSRNOG0000002946	suppressor of cytokine signaling 3 Source RGD Symbol Acc 621087

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1178002	ENSRNOT00000021289.8	Sorbs1	ENSRNOG0000015658	sorbin and SH3 domain containing 1 Source RGD Symbol Acc 1586598
F12	SBR1193100	ENSRNOT00000059255.5	Sqstm1	ENSRNOG0000003147	sequestosome 1 Source RGD Symbol Acc 69287
G01	SBR1199428	ENSRNOT00000080522.1	Stat1	ENSRNOG0000014079	signal transducer and activator of transcription 4 Source RGD Symbol Acc 1305747
G02	SBR1187845	ENSRNOT00000079677.1	LOC103694380	ENSRNOG0000055156	tumor necrosis factor-like Source RGD Symbol Acc 9404643
G03	SBR1107258	ENSRNOT00000017758.5	Tnfsf10	ENSRNOG0000013269	TNF superfamily member 10 Source RGD Symbol Acc 628734
G04	SBR1107690	ENSRNOT00000016447.6	Txn1	ENSRNOG0000012081	thioredoxin 1 Source RGD Symbol Acc 621157
G05	SBR1158608	ENSRNOT00000089545.1	Txnrd1	ENSRNOG0000009088	thioredoxin reductase 1 Source RGD Symbol Acc 61959
G06	SBR1108862	ENSRNOT00000044163.4	Vegfa	ENSRNOG0000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
G07	SBR1172041	ENSRNOT00000009673.7	Ccn4	ENSRNOG0000007078	cellular communication network factor 4 Source RGD Symbol Acc 69431
G08	SBR1167539	ENSRNOT00000090156.1	Wnt1	ENSRNOG0000061818	Wnt family member 1 Source RGD Symbol Acc 1597195
G09	SBR1180983	ENSRNOT00000019349.4	Wnt2b	ENSRNOG0000014385	Wnt family member 2B Source RGD Symbol Acc 69346
G10	SBR1178408	ENSRNOT00000064505.3	Wnt3a	ENSRNOG0000003039	Wnt family member 3A Source RGD Symbol Acc 1308057
G11	SBR1212833	ENSRNOT00000021164.3	Wnt5a	ENSRNOG0000015618	Wnt family member 5A Source RGD Symbol Acc 69250
G12	SBR1200772	ENSRNOT00000023439.6	Wnt6	ENSRNOG0000017409	Wnt family member 6 Source RGD Symbol Acc 1304559
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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