

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

## Rat Stress & Toxicity PathwayFinder

Cat. no. 249950 SBRN-003ZR

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	Adm	Aqp1	Aqp2	Aqp4	Arnt	Atf4	Atf6	Atg12	Atg7	Atm	Herpud1	Becn1
B	Bid	Bnip3l	Calr	Car9	Casp1	Casp7	Ccl12	Cd40lg	Cdkn1a	Cflr	Sit3a	Chek2
C	Crp	Dab2	Ddit3	Dnajc3	Edn1	Epo	Fas	Fth1	Gadd45a	Gadd45g	Gclc	Gclm
D	Grb2	Gsr	Gsp1	Hmax1	Hsp90aa1	Hsp90b1	Hspa1a	Hspa4	Hspa4l	Hspa5	Hus1	Irfng
E	Il1a	Il1b	Il6	Pgk1	Diablo	Mmp9	Mre11a	Nbn	Nfat5	Nqo1	Parp1	Parp2
F	Prdx1	PVR	Rad17	Rad51	Rad9a	Ripk1	Ripk3	Serpine1	Slc2a1	Slc6a6	Slc9a3	Sqstm1
G	Tlr4	LOC1036943 80	AABR0701832 3.1	Tnfrsf1a	Tp53	Txn1	Txn14b	Txnrd1	Ulk1	Vegfa	Xbp1	Xpc
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	SBR1135593	ENSRNOT00000036718.1	Adm	ENSRNOG0000027030	adrenomedullin Source RGD Symbol Acc 2047
A02	SBR1204719	ENSRNOT00000015692.2	Aqp1	ENSRNOG0000011648	aquaporin 1 Source RGD Symbol Acc 2141
A03	SBR1138109	ENSRNOT00000091717.1	Aqp2	ENSRNOG0000054378	aquaporin 2 Source RGD Symbol Acc 2142
A04	SBR1138496	ENSRNOT00000077606.1	Aqp4	ENSRNOG0000016043	aquaporin 4 Source RGD Symbol Acc 2143
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	SBR1113797	ENSRNOT00000029202.5	Atf6	ENSRNOG0000024632	activating transcription factor 6 Source RGD Symbol Acc 1305471
A08	SBR1115052	ENSRNOT00000000170.5	Atg12	ENSRNOG0000000157	autophagy related 12 Source RGD Symbol Acc 1306306
A09	SBR1149690	ENSRNOT00000067532.2	Atg7	ENSRNOG0000007486	autophagy related 7 Source RGD Symbol Acc 1304817
A10	SBR1113073	ENSRNOT00000050555.3	Atm	ENSRNOG0000029773	ATM serine/threonine kinase Source RGD Symbol Acc 1593265
A11	SBR1209229	ENSRNOT00000025559.5	Herpud1	ENSRNOG0000018796	homocysteine inducible ER protein with ubiquitin like domain 1 Source RGD Symbol Acc 620818
A12	SBR1101983	ENSRNOT00000075886.1	Becn1	ENSRNOG0000020513	beclin 1 Source RGD Symbol Acc 620190
B01	SBR1147619	ENSRNOT00000016776.2	Bid	ENSRNOG0000012439	BH3 interacting domain death agonist Source RGD Symbol Acc 620160
B02	SBR1172499	ENSRNOT00000014798.5	Bnip3l	ENSRNOG0000009820	BCL2 interacting protein 3 like Source RGD Symbol Acc 621354
B03	SBR1095160	ENSRNOT00000004091.6	Calr	ENSRNOG0000003029	calreticulin Source RGD Symbol Acc 620288
B04	SBR1133743	ENSRNOT00000023060.5	Car9	ENSRNOG0000017073	carbonic anhydrase 9 Source RGD Symbol Acc 1306426
B05	SBR1122190	ENSRNOT00000009993.6	Casp1	ENSRNOG0000007372	caspase 1 Source RGD Symbol Acc 2274
B06	SBR1124602	ENSRNOT00000080511.1	Casp7	ENSRNOG0000056216	caspase 7 Source RGD Symbol Acc 620944
B07	SBR1129555	ENSRNOT00000031626.5	Ccl12	ENSRNOG0000029768	chemokine (C-C motif) ligand 12 Source RGD Symbol Acc 1309255
B08	SBR1110042	ENSRNOT00000001162.4	Cd40lg	ENSRNOG0000000871	CD40 ligand Source RGD Symbol Acc 708418
B09	SBR1145142	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B10	SBR1157383	ENSRNOT00000085043.1	Cfr	ENSRNOG0000055103	cystic fibrosis transmembrane conductance regulator Source RGD Symbol Acc 2332
B11	SBR1115970	ENSRNOT00000043518.4	Stt3a	ENSRNOG0000031896	STT3A, catalytic subunit of the oligosaccharyltransferase complex Source RGD Symbol Acc 1565793
B12	SBR1132181	ENSRNOT00000085591.1	Chek2	ENSRNOG0000037509	checkpoint kinase 2 Source RGD Symbol Acc 621543
C01	SBR1169897	ENSRNOT00000000058.6	Crp	ENSRNOG0000000053	C-reactive protein Source RGD Symbol Acc 2411
C02	SBR1172394	ENSRNOT00000018998.8	Ddb2	ENSRNOG0000014071	damage specific DNA binding protein 2 Source RGD Symbol Acc 1310164
C03	SBR1210119	ENSRNOT00000083472.1	Ddit3	ENSRNOG0000006789	DNA-damage inducible transcript 3 Source RGD Symbol Acc 62391
C04	SBR1201517	ENSRNOT00000093411.1	Dnajc3	ENSRNOG0000010352	DnaJ heat shock protein family (Hsp40) member C3 Source RGD Symbol Acc 708518
C05	SBR1168689	ENSRNOT00000019361.2	Edn1	ENSRNOG0000014361	endothelin 1 Source RGD Symbol Acc 2532
C06	SBR1147729	ENSRNOT00000001914.4	Epo	ENSRNOG0000001412	erythropoietin Source RGD Symbol Acc 2559
C07	SBR1159525	ENSRNOT00000025928.5	Fas	ENSRNOG0000019142	Fas cell surface death receptor Source RGD Symbol Acc 619831
C08	SBR1160832	ENSRNOT00000030919.5	Fth1	ENSRNOG0000022619	ferritin heavy chain 1 Source RGD Symbol Acc 2635
C09	SBR1179414	ENSRNOT00000007698.6	Gadd45a	ENSRNOG0000005615	growth arrest and DNA-damage-inducible, alpha Source RGD Symbol Acc 2654
C10	SBR1194608	ENSRNOT00000018252.7	Gadd45g	ENSRNOG0000013090	growth arrest and DNA-damage-inducible, gamma Source RGD Symbol Acc 1311796
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1095943	033196.3	Gclc	000006302	glutamate-cysteine ligase, catalytic subunit Source RGD Symbol Acc 619868
C12	SBR1197356	ENSRNOT0000018343.4	Gclm	ENSRNOG0000013409	glutamate cysteine ligase, modifier subunit Source RGD Symbol Acc 619871
D01	SBR1181692	ENSRNOT00000005347.5	Grb2	ENSRNOG0000003990	growth factor receptor bound protein 2 Source RGD Symbol Acc 619758
D02	SBR1141526	ENSRNOT00000020252.6	Gsr	ENSRNOG0000014915	glutathione-disulfide reductase Source RGD Symbol Acc 621747
D03	SBR1125046	ENSRNOT00000024601.4	Gstp1	ENSRNOG0000018237	glutathione S-transferase pi 1 Source RGD Symbol Acc 2758
D04	SBR1146734	ENSRNOT00000019192.6	Hmox1	ENSRNOG0000014117	heme oxygenase 1 Source RGD Symbol Acc 2806
D05	SBR1113341	ENSRNOT00000086310.1	Hsp90aa1	ENSRNOG0000059714	heat shock protein 90 alpha family class A member 1 Source RGD Symbol Acc 631409
D06	SBR1196985	ENSRNOT00000079731.1	Hsp90b1	ENSRNOG0000026963	heat shock protein 90 beta family member 1 Source RGD Symbol Acc 1310482
D07	SBR1189015	ENSRNOT00000081924.1	Hspa1a	ENSRNOG0000050647	heat shock protein family A (Hsp70) member 1B Source RGD Symbol Acc 2840
D08	SBR1138708	ENSRNOT00000023628.3	Hspa4	ENSRNOG0000016596	heat shock protein family A member 4 Source RGD Symbol Acc 628878
D09	SBR1146380	ENSRNOT00000015474.6	Hspa4l	ENSRNOG0000010819	heat shock protein family A (Hsp70) member 4 like Source RGD Symbol Acc 1306528
D10	SBR1166340	ENSRNOT00000025067.6	Hspa5	ENSRNOG0000018294	heat shock protein family A member 5 Source RGD Symbol Acc 2843
D11	SBR1152038	ENSRNOT00000091671.1	Hus1	ENSRNOG0000005141	HUS1 checkpoint clamp component Source RGD Symbol Acc 1591976
D12	SBR1108917	ENSRNOT00000009919.2	Iifng	ENSRNOG0000007468	interferon gamma Source RGD Symbol Acc 2866
E01	SBR1106125	ENSRNOT00000006113.8	Il1a	ENSRNOG0000004575	interleukin 1 alpha Source RGD Symbol Acc 2890
E02	SBR1196387	ENSRNOT00000006308.4	Il1b	ENSRNOG0000004649	interleukin 1 beta Source RGD Symbol Acc 2891
E03	SBR1156877	ENSRNOT00000013732.6	Il6	ENSRNOG0000010278	interleukin 6 Source RGD Symbol Acc 2901
E04	SBR1149927	ENSRNOT00000077604.1	Pgk1	ENSRNOG0000058249	phosphoglycerate kinase 1 Source RGD Symbol Acc 619878
E05	SBR1124639	ENSRNOT00000047861.4	Diablo	ENSRNOG0000029197	diablo, IAP-binding mitochondrial protein Source RGD Symbol Acc 1310885
E06	SBR1206750	ENSRNOT00000023965.3	Mmp9	ENSRNOG0000017539	matrix metalloproteinase 9 Source RGD Symbol Acc 621320
E07	SBR1133175	ENSRNOT00000012940.4	Mre11a	ENSRNOG0000009506	MRE11 homolog A, double strand break repair nuclease Source RGD Symbol Acc 69263
E08	SBR1194336	ENSRNOT00000012377.4	Nbn	ENSRNOG0000008580	nibrin Source RGD Symbol Acc 621420
E09	SBR1141053	ENSRNOT00000017005.5	Nfat5	ENSRNOG0000011879	nuclear factor of activated T-cells 5 Source RGD Symbol Acc 1309142
E10	SBR1125692	ENSRNOT00000017174.5	Nqo1	ENSRNOG0000012772	NAD(P)H quinone dehydrogenase 1 Source RGD Symbol Acc 2503
E11	SBR1161994	ENSRNOT00000004232.5	Parp1	ENSRNOG0000003084	poly (ADP-ribose) polymerase 1 Source RGD Symbol Acc 2053
E12	SBR1191091	ENSRNOT00000011840.6	Parp2	ENSRNOG0000008892	poly (ADP-ribose) polymerase 2 Source RGD Symbol Acc 1310568
F01	SBR1147176	ENSRNOT00000023132.5	Prdx1	ENSRNOG0000017194	peroxiredoxin 1 Source RGD Symbol Acc 620039
F02	SBR1108421	ENSRNOT00000064305.3	PVR	ENSRNOG0000019202	poliovirus receptor Source RGD Symbol Acc 3813
F03	SBR1186209	ENSRNOT00000024801.4	Rad17	ENSRNOG0000018353	RAD17 checkpoint clamp loader component Source RGD Symbol Acc 1309515
F04	SBR1098144	ENSRNOT00000056432.2	Rad51	ENSRNOG0000037302	RAD51 recombinase Source RGD Symbol Acc 1563603
F05	SBR1187108	ENSRNOT00000025317.5	Rad9a	ENSRNOG0000018729	RAD9 checkpoint clamp component A Source RGD Symbol Acc 2319938
F06	SBR1174883	ENSRNOT00000023962.5	Ripk1	ENSRNOG0000017787	receptor interacting serine/threonine kinase 1 Source RGD Symbol Acc 1310158
F07	SBR1213689	ENSRNOT00000027759.4	Ripk3	ENSRNOG0000020465	receptor-interacting serine-threonine kinase 3 Source RGD Symbol Acc 628899
F08	SBR1126485	ENSRNOT00000001916.2	Serpine1	ENSRNOG0000001414	serpin family E member 1 Source RGD Symbol Acc 3249
F09	SBR1109042	ENSRNOT00000064452.2	Slc2a1	ENSRNOG0000007284	solute carrier family 2 member 1 Source RGD Symbol Acc 3704
F10	SBR1142717	ENSRNOT00000012875.6	Slc6a6	ENSRNOG0000009019	solute carrier family 6 member 6 Source RGD Symbol Acc 61912

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1168632	ENSRNOT00000020711.3	Slc9a3	ENSRNOG0000015159	solute carrier family 9 member A3 Source RGD Symbol Acc 3720
F12	SBR1193100	ENSRNOT00000059255.5	Sqstm1	ENSRNOG0000003147	sequestosome 1 Source RGD Symbol Acc 69287
G01	SBR1180108	ENSRNOT00000014020.3	Tlr4	ENSRNOG0000010522	toll-like receptor 4 Source RGD Symbol Acc 3870
G02	SBR1187845	ENSRNOT00000079677.1	LOC103694380	ENSRNOG0000055156	tumor necrosis factor-like Source RGD Symbol Acc 9404643
G03	SBR1211981	ENSRNOT00000066128.4	AABR07018323.1	ENSRNOG0000038483	
G04	SBR1130829	ENSRNOT00000048529.4	Tnfrsf1a	ENSRNOG0000003132	TNF receptor superfamily member 1A Source RGD Symbol Acc 621237
G05	SBR1172374	ENSRNOT00000046490.3	Tp53	ENSRNOG0000010756	tumor protein p53 Source RGD Symbol Acc 3889
G06	SBR1107690	ENSRNOT00000016447.6	Txn1	ENSRNOG0000012081	thioredoxin 1 Source RGD Symbol Acc 621157
G07	SBR1213913	ENSRNOT00000034676.4	Txn14b	ENSRNOG0000021379	thioredoxin-like 4B Source RGD Symbol Acc 1305127
G08	SBR1158608	ENSRNOT00000089545.1	Txnrd1	ENSRNOG0000009088	thioredoxin reductase 1 Source RGD Symbol Acc 61959
G09	SBR1188200	ENSRNOT00000056790.3	Ulk1	ENSRNOG00000037505	unc-51 like autophagy activating kinase 1 Source RGD Symbol Acc 1589743
G10	SBR1108862	ENSRNOT00000044163.4	Vegfa	ENSRNOG0000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
G11	SBR1176433	ENSRNOT00000014044.6	Xbp1	ENSRNOG0000010298	X-box binding protein 1 Source RGD Symbol Acc 1303073
G12	SBR1133388	ENSRNOT00000011490.3	Xpc	ENSRNOG0000008274	XPC complex subunit, DNA damage recognition and repair factor Source RGD Symbol Acc 1305760
H01	SBR1220567	ENSRNOT00000042459.4	Actb	ENSRNOG00000034254	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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