

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

## Rat Neurotoxicity

Cat. no. 249950 SBRN-096ZA

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
<b>A</b>	LOC1009097 50	Angptl4	Arg1	Arg2	Arrib1	Aif4	Bag4	Bdnf	Bik	Birc2	Camk2a	Camk2d
<b>B</b>	Casp7	Ccnd1	Cd8b	Cdkn1a	Cdo1	Cidea	Cideb	Clcn5	Clcnkb	Col12a1	Dapk1	Ddit3
<b>C</b>	Drd2	Drp2	Dynll1	Egln3	Eif2ak3	Ereg	Fas	Faslg	Gal	Galc	Gch1	Gpr37
<b>D</b>	Grin1	Gsn	Gsr	Gucy1a1	Heph	Hsp90aa1	Hspa5	Htr1a	Htr3a	Il10	Kit	Cradd
<b>E</b>	Lefty2	Lta	Mmp9	NfkB1	Nol3	LOC1003610 87	Nosip	Nostin	Notch4	Nup50	Pappa1	Pdia4
<b>F</b>	Plp1	Pou1f1	Prim2	Pygb	Rasd1	Sema3b	Sfn5	Slc16a3	Sod2	Tacr1	AABR0701832 3.1	Tnfrsf11b
<b>G</b>	Tnfrsf25	Tp53	Tph1	Traf2	Traf4	Trpm1	Trpm4	Txnip	Tyrp1	Usp7	Xiap	Ywhae
<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	SBR1140753	ENSRNOT00000042495.5	LOC100909750	ENSRNOG0000047356	tyrosine-protein kinase ABL1-like Source RGD Symbol Acc 6502032
A02	SBR1186322	ENSRNOT00000010031.6	Angptl4	ENSRNOG0000007545	angiotensin-like 4 Source RGD Symbol Acc 735058
A03	SBR1104555	ENSRNOT00000017911.5	Arg1	ENSRNOG0000013304	arginase 1 Source RGD Symbol Acc 2150
A04	SBR1136389	ENSRNOT00000083433.1	Arg2	ENSRNOG0000053811	arginase 2 Source RGD Symbol Acc 2151
A05	SBR1174142	ENSRNOT00000043554.4	Arrb1	ENSRNOG0000030404	arrestin, beta 1 Source RGD Symbol Acc 2156
A06	SBR1186510	ENSRNOT00000065304.4	Atf4	ENSRNOG0000017801	activating transcription factor 4 Source RGD Symbol Acc 621863
A07	SBR1199175	ENSRNOT00000066901.3	Bag4	ENSRNOG0000042560	BCL2-associated athanogene 4 Source MGI Symbol Acc MGI 1914634
A08	SBR1172593	ENSRNOT00000083542.1	Bdnf	ENSRNOG0000047466	brain-derived neurotrophic factor Source RGD Symbol Acc 2202
A09	SBR1218519	ENSRNOT00000013977.2	Bik	ENSRNOG0000010359	BCL2-interacting killer Source RGD Symbol Acc 621547
A10	SBR1099985	ENSRNOT00000014560.6	Birc2	ENSRNOG0000010602	baculoviral IAP repeat-containing 2 Source RGD Symbol Acc 620690
A11	SBR1215824	ENSRNOT00000080177.1	Camk2a	ENSRNOG0000018712	calcium/calmodulin-dependent protein kinase II alpha Source RGD Symbol Acc 2261
A12	SBR1162425	ENSRNOT00000015564.7	Camk2d	ENSRNOG0000011589	calcium/calmodulin-dependent protein kinase II delta Source RGD Symbol Acc 2263
B01	SBR1124602	ENSRNOT00000080511.1	Casp7	ENSRNOG0000056216	caspase 7 Source RGD Symbol Acc 620944
B02	SBR1211432	ENSRNOT00000028411.3	Ccnd1	ENSRNOG0000020918	cyclin D1 Source RGD Symbol Acc 68384
B03	SBR1112088	ENSRNOT00000009392.7	Cd8b	ENSRNOG0000007129	CD8b molecule Source RGD Symbol Acc 2317
B04	SBR1145142	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B05	SBR1158136	ENSRNOT00000000172.5	Cdo1	ENSRNOG0000000158	cysteine dioxygenase type 1 Source RGD Symbol Acc 69262
B06	SBR1168374	ENSRNOT00000024968.7	Cidea	ENSRNOG0000018505	cell death-inducing DFFA-like effector a Source RGD Symbol Acc 1305106
B07	SBR1209539	ENSRNOT00000027612.6	Cideb	ENSRNOG0000020377	cell death-inducing DFFA-like effector b Source RGD Symbol Acc 1310000
B08	SBR1210686	ENSRNOT00000079054.1	Clcn5	ENSRNOG0000002862	chloride voltage-gated channel 5 Source RGD Symbol Acc 2362
B09	SBR1178734	ENSRNOT00000013550.5	Clcnkb	ENSRNOG0000009897	chloride voltage-gated channel Kb Source RGD Symbol Acc 628639
B10	SBR1196478	ENSRNOT00000077071.1	Col12a1	ENSRNOG0000058470	collagen type XII alpha 1 chain Source RGD Symbol Acc 2374
B11	SBR1155991	ENSRNOT00000080750.1	Dapk1	ENSRNOG0000018198	death associated protein kinase 1 Source RGD Symbol Acc 1311629
B12	SBR1210119	ENSRNOT00000083472.1	Ddit3	ENSRNOG0000006789	DNA-damage inducible transcript 3 Source RGD Symbol Acc 62391
C01	SBR1132727	ENSRNOT00000083419.1	Drd2	ENSRNOG0000008428	dopamine receptor D2 Source RGD Symbol Acc 2520
C02	SBR1117443	ENSRNOT00000085693.1	Drp2	ENSRNOG0000026704	dystrophin related protein 2 Source RGD Symbol Acc 621750
C03	SBR1179168	ENSRNOT00000014910.5	Dynll1	ENSRNOG0000011222	dynein light chain LC8-type 1 Source RGD Symbol Acc 619866
C04	SBR1128032	ENSRNOT00000007219.2	Egln3	ENSRNOG0000005053	egl-9 family hypoxia-inducible factor 3 Source RGD Symbol Acc 71019
C05	SBR1191631	ENSRNOT00000008451.5	Eif2ak3	ENSRNOG0000006069	eukaryotic translation initiation factor 2 alpha kinase 3 Source RGD Symbol Acc 70884
C06	SBR1120104	ENSRNOT00000003716.3	Ereg	ENSRNOG0000002771	epiregulin Source RGD Symbol Acc 620299
C07	SBR1159525	ENSRNOT00000025928.5	Fas	ENSRNOG0000019142	Fas cell surface death receptor Source RGD Symbol Acc 619831
C08	SBR1097457	ENSRNOT00000003998.2	Faslg	ENSRNOG0000002978	Fas ligand Source RGD Symbol Acc 3880
C09	SBR1161425	ENSRNOT00000020425.5	Gal	ENSRNOG0000015156	galanin and GMAP prepropeptide Source RGD Symbol Acc 61954
C10	SBR1215542	ENSRNOT00000005015.6	Galc	ENSRNOG0000003759	galactosylceramidase Source RGD Symbol Acc 1359384
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1209903	014821.7	Gch1	000011039	GTP cyclohydrolase 1 Source RGD Symbol Acc 61992
C12	SBR1114021	ENSRNOT0000003593.6	Gpr37	ENSRNOG0000002524	G protein-coupled receptor 37 Source RGD Symbol Acc 619848
D01	SBR1215394	ENSRNOT00000044246.4	Grin1	ENSRNOG00000011726	glutamate ionotropic receptor NMDA type subunit 1 Source RGD Symbol Acc 2736
D02	SBR1159016	ENSRNOT00000025857.5	Gsn	ENSRNOG0000018991	gelsolin Source RGD Symbol Acc 1303089
D03	SBR1141526	ENSRNOT00000020252.6	Gsr	ENSRNOG0000014915	glutathione-disulfide reductase Source RGD Symbol Acc 621747
D04	SBR1205788	ENSRNOT00000017190.4	Gucy1a1	ENSRNOG0000012302	guanylate cyclase 1 soluble subunit alpha 1 Source RGD Symbol Acc 68436
D05	SBR1111409	ENSRNOT00000092103.1	Heph	ENSRNOG0000012294	hephaestin Source RGD Symbol Acc 71060
D06	SBR1113341	ENSRNOT00000086310.1	Hsp90aa1	ENSRNOG0000059714	heat shock protein 90 alpha family class A member 1 Source RGD Symbol Acc 631409
D07	SBR1166340	ENSRNOT00000025067.6	Hspa5	ENSRNOG0000018294	heat shock protein family A member 5 Source RGD Symbol Acc 2843
D08	SBR1152900	ENSRNOT00000013618.2	Htr1a	ENSRNOG0000010254	5-hydroxytryptamine receptor 1A Source RGD Symbol Acc 2845
D09	SBR1142571	ENSRNOT00000008965.4	Htr3a	ENSRNOG0000006595	5-hydroxytryptamine receptor 3A Source RGD Symbol Acc 61818
D10	SBR1123238	ENSRNOT00000006246.5	Il10	ENSRNOG0000004647	interleukin 10 Source RGD Symbol Acc 2886
D11	SBR1117090	ENSRNOT00000090654.1	Kit	ENSRNOG0000002227	KIT proto-oncogene receptor tyrosine kinase Source RGD Symbol Acc 620568
D12	SBR1166176	ENSRNOT00000063946.1	Cradd	ENSRNOG0000008507	CASP2 and RIPK1 domain containing adaptor with death domain Source RGD Symbol Acc 1311010
E01	SBR1165646	ENSRNOT00000080574.1	Lefty2	ENSRNOG0000060325	Left-right determination factor 2 Source RGD Symbol Acc 1359679
E02	SBR1181153	ENSRNOT00000088936.1	Lta	ENSRNOG0000000838	lymphotoxin alpha Source RGD Symbol Acc 3020
E03	SBR1206750	ENSRNOT00000023965.3	Mmp9	ENSRNOG0000017539	matrix metalloproteinase 9 Source RGD Symbol Acc 621320
E04	SBR1111134	ENSRNOT00000036838.4	Nfkb1	ENSRNOG0000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
E05	SBR1157171	ENSRNOT00000020908.5	Nol3	ENSRNOG0000015588	nucleolar protein 3 Source RGD Symbol Acc 708558
E06	SBR1188118	ENSRNOT00000032218.5	LOC100361087	ENSRNOG0000042929	hypothetical LOC100361087 Source RGD Symbol Acc 2320873
E07	SBR1130626	ENSRNOT00000027882.7	Nosip	ENSRNOG0000020543	nitric oxide synthase interacting protein Source RGD Symbol Acc 1309992
E08	SBR1136149	ENSRNOT00000067161.3	Nostrin	ENSRNOG0000006611	nitric oxide synthase trafficking Source RGD Symbol Acc 727920
E09	SBR1192212	ENSRNOT00000000513.4	Notch4	ENSRNOG0000000442	notch 4 Source RGD Symbol Acc 1303282
E10	SBR1170313	ENSRNOT00000080933.1	Nup50	ENSRNOG0000013423	nucleoporin 50 Source RGD Symbol Acc 3191
E11	SBR1143148	ENSRNOT00000076111.2	Pappa1	ENSRNOG0000033527	pappalysin 1 Source RGD Symbol Acc 1307742
E12	SBR1135596	ENSRNOT00000008728.5	Pdia4	ENSRNOG0000006228	protein disulfide isomerase family A, member 4 Source RGD Symbol Acc 619835
F01	SBR1191082	ENSRNOT00000003283.6	Plp1	ENSRNOG0000002419	proteolipid protein 1 Source RGD Symbol Acc 3354
F02	SBR1098823	ENSRNOT00000000905.6	Pou1f1	ENSRNOG0000000715	POU class 1 homeobox 1 Source RGD Symbol Acc 3367
F03	SBR1172917	ENSRNOT00000016828.8	Prim2	ENSRNOG0000012486	DNA primase subunit 2 Source RGD Symbol Acc 631433
F04	SBR1213501	ENSRNOT00000010157.6	Pygb	ENSRNOG0000007583	glycogen phosphorylase B Source RGD Symbol Acc 3460
F05	SBR1159822	ENSRNOT00000004475.6	Rasd1	ENSRNOG0000003348	ras related dexamethasone induced 1 Source RGD Symbol Acc 619727
F06	SBR1139057	ENSRNOT00000066296.1	Sema3b	ENSRNOG0000016512	semaphorin 3B Source RGD Symbol Acc 1310079
F07	SBR1176581	ENSRNOT00000057537.4	Sfxn5	ENSRNOG0000037871	sideroflexin 5 Source RGD Symbol Acc 628706
F08	SBR1176498	ENSRNOT00000054939.3	Slc16a3	ENSRNOG0000036677	solute carrier family 16 member 3 Source RGD Symbol Acc 620603
F09	SBR1204773	ENSRNOT00000025794.4	Sod2	ENSRNOG0000019048	superoxide dismutase 2 Source RGD Symbol Acc 3732
F10	SBR1116879	ENSRNOT00000007984.5	Tacr1	ENSRNOG0000005853	tachykinin receptor 1 Source RGD Symbol Acc 3811

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1211981	ENSRNOT00000066128.4	AABR07018323.1	ENSRNOG0000038483	
F12	SBR1183920	ENSRNOT00000011344.5	Tnfrsf11b	ENSRNOG0000008336	TNF receptor superfamily member 11B Source RGD Symbol Acc 619802
G01	SBR1188451	ENSRNOT00000055466.2	Tnfrsf25	ENSRNOG0000001814	TNF receptor superfamily member 25 Source RGD Symbol Acc 1598206
G02	SBR1172374	ENSRNOT00000046490.3	Tp53	ENSRNOG0000010756	tumor protein p53 Source RGD Symbol Acc 3889
G03	SBR1144493	ENSRNOT00000056109.3	Tph1	ENSRNOG0000011672	tryptophan hydroxylase 1 Source RGD Symbol Acc 3895
G04	SBR1181541	ENSRNOT00000008253.6	Traf2	ENSRNOG0000006238	Tnf receptor-associated factor 2 Source RGD Symbol Acc 1310457
G05	SBR1109104	ENSRNOT00000018468.5	Traf4	ENSRNOG0000013169	Tnf receptor associated factor 4 Source RGD Symbol Acc 1306708
G06	SBR1102118	ENSRNOT00000021262.6	Trpm1	ENSRNOG0000015829	transient receptor potential cation channel, subfamily M, member 1 Source RGD Symbol Acc 1597140
G07	SBR1141820	ENSRNOT00000041513.4	Trpm4	ENSRNOG0000020714	transient receptor potential cation channel, subfamily M, member 4 Source RGD Symbol Acc 620244
G08	SBR1211460	ENSRNOT00000028793.6	Txnip	ENSRNOG0000021201	thioredoxin interacting protein Source RGD Symbol Acc 620886
G09	SBR1104737	ENSRNOT00000046503.3	Tyrp1	ENSRNOG0000029318	tyrosinase-related protein 1 Source RGD Symbol Acc 1593266
G10	SBR1170367	ENSRNOT00000046232.5	Usp7	ENSRNOG0000025496	ubiquitin specific peptidase 7 Source RGD Symbol Acc 1306915
G11	SBR1144925	ENSRNOT00000009336.3	Xiap	ENSRNOG0000006967	X-linked inhibitor of apoptosis Source RGD Symbol Acc 620692
G12	SBR1216649	ENSRNOT00000007100.5	Ywhae	ENSRNOG0000005290	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon Source RGD Symbol Acc 62000
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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