

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

## Rat Neurotransmitter Receptors

Cat. no. 249950 SBRN-060ZA

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
A	Adra1a	Adra1d	Adra2a	Adrb2	Adrb3	Avpr1a	LOC100909648	Brs3	Cckbr	Chrm1	Chrm4	Chrm5
B	Chrna3	Chrna4	Chrna5	Chrna6	Chrna7	Chrne	Cnr1	Drd1	Drd2	Drd5	Gabbr1	Gabbr2
C	Gabra1	Gabra2	Gabra4	Gabra5	Gabra6	Gabrb1	Gabrb3	Gabrd	Gabre	Gabrg1	Gabrg2	Gabrg3
D	Gabraq	Gabbr1	Gabbr2	Gcgr	Gria1	Gria2	Gria3	Grik1	Grik2	Grik4	Grik5	Grin1
E	Grin2a	Grin2b	Grin2c	Grm1	Grm3	Grm4	Grm5	Grm6	Grm7	Grm8	Grpr	Hctr2
F	Hrh1	Hrh4	Htr1a	Htr1b	Htr1d	Htr1f	Htr2a	Htr2c	Htr3a	Htr4	Htr7	Npy2r
G	Npy5r	Ntsr2	Oxtr	Prokr2	Scr	Sstr1	Sstr2	Sstr4	Tacr1	Tacr2	Tacr3	Tspo
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	SBR1152290	ENSRNOT00000012736.3	Adra1a	ENSRNOG0000009522	adrenoceptor alpha 1A Source RGD Symbol Acc 2055
A02	SBR1115374	ENSRNOT00000028877.2	Adra1d	ENSRNOG00000021256	adrenoceptor alpha 1D Source RGD Symbol Acc 62064
A03	SBR1152272	ENSRNOT00000071541.1	Adra2a	ENSRNOG0000047545	adrenoceptor alpha 2A Source RGD Symbol Acc 2056
A04	SBR1208091	ENSRNOT00000026098.3	Adrb2	ENSRNOG0000019217	adrenoceptor beta 2 Source RGD Symbol Acc 2060
A05	SBR1209022	ENSRNOT00000016907.2	Adrb3	ENSRNOG0000012674	adrenoceptor beta 3 Source RGD Symbol Acc 2061
A06	SBR1183281	ENSRNOT00000005829.5	Avpr1a	ENSRNOG0000004400	arginine vasopressin receptor 1A Source RGD Symbol Acc 2185
A07	SBR1193701	ENSRNOT00000074512.2	LOC100909648	ENSRNOG0000048522	arginine vasopressin receptor 1B Source RGD Symbol Acc 61886
A08	SBR1178181	ENSRNOT00000001164.5	Brs3	ENSRNOG0000000873	bombesin receptor subtype 3 Source RGD Symbol Acc 628645
A09	SBR1134148	ENSRNOT00000085395.1	Cckbr	ENSRNOG0000017679	cholecystokinin B receptor Source RGD Symbol Acc 2290
A10	SBR1195844	ENSRNOT00000024785.4	Chrm1	ENSRNOG0000018385	cholinergic receptor, muscarinic 1 Source RGD Symbol Acc 2342
A11	SBR1095496	ENSRNOT00000023583.5	Chrm4	ENSRNOG0000017556	cholinergic receptor, muscarinic 4 Source RGD Symbol Acc 2344
A12	SBR1167250	ENSRNOT00000008387.6	Chrm5	ENSRNOG0000006397	cholinergic receptor, muscarinic 5 Source RGD Symbol Acc 620027
B01	SBR1136061	ENSRNOT00000019307.4	Chrna3	ENSRNOG0000013829	cholinergic receptor nicotinic alpha 3 subunit Source RGD Symbol Acc 2345
B02	SBR1155000	ENSRNOT00000009041.7	Chrna4	ENSRNOG0000011202	cholinergic receptor nicotinic alpha 4 subunit Source RGD Symbol Acc 2346
B03	SBR1132955	ENSRNOT00000088304.1	Chrna5	ENSRNOG0000013610	cholinergic receptor nicotinic alpha 5 subunit Source RGD Symbol Acc 2347
B04	SBR1194559	ENSRNOT00000016452.4	Chrna6	ENSRNOG0000012283	cholinergic receptor nicotinic alpha 6 subunit Source RGD Symbol Acc 69281
B05	SBR1175478	ENSRNOT00000051883.4	Chrna7	ENSRNOG0000010853	cholinergic receptor nicotinic alpha 7 subunit Source RGD Symbol Acc 2348
B06	SBR1121895	ENSRNOT00000005050.4	Chrne	ENSRNOG0000003777	cholinergic receptor nicotinic epsilon subunit Source RGD Symbol Acc 2353
B07	SBR1112580	ENSRNOT00000010850.2	Cnr1	ENSRNOG0000008223	cannabinoid receptor 1 Source RGD Symbol Acc 2369
B08	SBR1169120	ENSRNOT00000030893.3	Drd1	ENSRNOG0000023688	dopamine receptor D1 Source RGD Symbol Acc 2518
B09	SBR1132727	ENSRNOT00000083419.1	Drd2	ENSRNOG0000008428	dopamine receptor D2 Source RGD Symbol Acc 2520
B10	SBR1106163	ENSRNOT00000007074.2	Drd5	ENSRNOG0000005338	dopamine receptor D5 Source RGD Symbol Acc 2523
B11	SBR1111634	ENSRNOT00000051634.5	Gabbr1	ENSRNOG0000000774	gamma-aminobutyric acid type B receptor subunit 1 Source RGD Symbol Acc 621537
B12	SBR1193822	ENSRNOT00000011573.4	Gabbr2	ENSRNOG0000008431	gamma-aminobutyric acid type B receptor subunit 2 Source RGD Symbol Acc 619864
C01	SBR1169367	ENSRNOT00000004725.7	Gabra1	ENSRNOG0000003512	gamma-aminobutyric acid type A receptor alpha1 subunit Source RGD Symbol Acc 61855
C02	SBR1116109	ENSRNOT00000064779.4	Gabra2	ENSRNOG0000002349	gamma-aminobutyric acid type A receptor alpha2 subunit Source RGD Symbol Acc 61856
C03	SBR1206079	ENSRNOT00000003191.6	Gabra4	ENSRNOG0000002336	gamma-aminobutyric acid type A receptor alpha4 subunit Source RGD Symbol Acc 621670
C04	SBR1216599	ENSRNOT00000093306.1	Gabra5	ENSRNOG0000010803	gamma-aminobutyric acid type A receptor alpha 5 subunit Source RGD Symbol Acc 61859
C05	SBR1118293	ENSRNOT00000004877.4	Gabra6	ENSRNOG0000003569	gamma-aminobutyric acid type A receptor alpha 6 subunit Source RGD Symbol Acc 61861
C06	SBR1143118	ENSRNOT00000003170.3	Gabbr1	ENSRNOG0000002327	gamma-aminobutyric acid type A receptor beta 1 subunit Source RGD Symbol Acc 2649
C07	SBR1115353	ENSRNOT00000081831.1	Gabbr3	ENSRNOG0000060599	gamma-aminobutyric acid type A receptor beta 3 subunit Source RGD Symbol Acc 2651
C08	SBR1136161	ENSRNOT00000022246.4	Gabrd	ENSRNOG0000016385	gamma-aminobutyric acid type A receptor delta subunit Source RGD Symbol Acc 61901
C09	SBR1100491	ENSRNOT00000077750.1	Gabre	ENSRNOG0000061182	gamma-aminobutyric acid type A receptor epsilon subunit Source RGD Symbol Acc 68320
C10	SBR1172493	ENSRNOT00000003240.6	Gabrg1	ENSRNOG0000002360	gamma-aminobutyric acid type A receptor gamma 1 subunit Source RGD Symbol Acc 621732
		ENSRNOT000000		ENSRNOG00	gamma-aminobutyric acid type A receptor gamma 2 subunit Source RGD

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1150926	082445.1	Gabrg2	000003241	Symbol Acc 61966
C12	SBR1214963	ENSRNOT00000 093339.1	Gabrg3	ENSRNOG00 000014862	gamma-aminobutyric acid type A receptor gamma 3 subunit Source RGD Symbol Acc 621735
D01	SBR1164707	ENSRNOT00000 078419.1	Gabrq	ENSRNOG00 000053402	gamma-aminobutyric acid type A receptor theta subunit Source RGD Symbol Acc 68331
D02	SBR1135162	ENSRNOT00000 010172.6	Gabbr1	ENSRNOG00 000007603	gamma-aminobutyric acid type A receptor rho 1 subunit Source RGD Symbol Acc 61900
D03	SBR1130923	ENSRNOT00000 081825.1	Gabbr2	ENSRNOG00 000007490	gamma-aminobutyric acid type A receptor rho 2 subunit Source RGD Symbol Acc 61902
D04	SBR1141470	ENSRNOT00000 054962.2	Gcgr	ENSRNOG00 000036692	glucagon receptor Source RGD Symbol Acc 2669
D05	SBR1181304	ENSRNOT00000 073148.2	Gria1	ENSRNOG00 000045816	glutamate ionotropic receptor AMPA type subunit 1 Source RGD Symbol Acc 621531
D06	SBR1126470	ENSRNOT00000 077941.1	Gria2	ENSRNOG00 000054204	glutamate ionotropic receptor AMPA type subunit 2 Source RGD Symbol Acc 61862
D07	SBR1198346	ENSRNOT00000 029031.7	Gria3	ENSRNOG00 000007682	glutamate ionotropic receptor AMPA type subunit 3 Source RGD Symbol Acc 70958
D08	SBR1110348	ENSRNOT00000 042581.5	Grik1	ENSRNOG00 000001575	glutamate ionotropic receptor kainate type subunit 1 Source RGD Symbol Acc 2732
D09	SBR1176910	ENSRNOT00000 076234.1	Grik2	ENSRNOG00 000000368	glutamate ionotropic receptor kainate type subunit 2 Source RGD Symbol Acc 2733
D10	SBR1123409	ENSRNOT00000 048347.3	Grik4	ENSRNOG00 000030910	glutamate ionotropic receptor kainate type subunit 4 Source RGD Symbol Acc 2734
D11	SBR1188412	ENSRNOT00000 027578.6	Grik5	ENSRNOG00 000020310	glutamate ionotropic receptor kainate type subunit 5 Source RGD Symbol Acc 2735
D12	SBR1215394	ENSRNOT00000 044246.4	Grin1	ENSRNOG00 000011726	glutamate ionotropic receptor NMDA type subunit 1 Source RGD Symbol Acc 2736
E01	SBR1188957	ENSRNOT00000 044626.3	Grin2a	ENSRNOG00 000033942	glutamate ionotropic receptor NMDA type subunit 2A Source RGD Symbol Acc 2737
E02	SBR1117521	ENSRNOT00000 011697.4	Grin2b	ENSRNOG00 000008766	glutamate ionotropic receptor NMDA type subunit 2B Source RGD Symbol Acc 2738
E03	SBR1207332	ENSRNOT00000 004477.5	Grin2c	ENSRNOG00 000003280	glutamate ionotropic receptor NMDA type subunit 2C Source RGD Symbol Acc 2739
E04	SBR1115900	ENSRNOT00000 044325.3	Grm1	ENSRNOG00 000014290	glutamate metabotropic receptor 1 Source RGD Symbol Acc 2742
E05	SBR1095973	ENSRNOT00000 007572.7	Grm3	ENSRNOG00 000005519	glutamate metabotropic receptor 3 Source RGD Symbol Acc 2744
E06	SBR1182094	ENSRNOT00000 066115.3	Grm4	ENSRNOG00 000000487	glutamate metabotropic receptor 4 Source RGD Symbol Acc 2745
E07	SBR1162445	ENSRNOT00000 050639.2	Grm5	ENSRNOG00 000016429	glutamate metabotropic receptor 5 Source RGD Symbol Acc 2746
E08	SBR1160052	ENSRNOT00000 000249.6	Grm6	ENSRNOG00 000000233	glutamate metabotropic receptor 6 Source RGD Symbol Acc 2747
E09	SBR1096823	ENSRNOT00000 056570.3	Grm7	ENSRNOG00 000005662	glutamate metabotropic receptor 7 Source RGD Symbol Acc 619857
E10	SBR1099878	ENSRNOT00000 031714.4	Grm8	ENSRNOG00 000021468	glutamate metabotropic receptor 8 Source RGD Symbol Acc 619858
E11	SBR1122754	ENSRNOT00000 005559.6	Grpr	ENSRNOG00 000004124	gastrin releasing peptide receptor Source RGD Symbol Acc 2750
E12	SBR1093647	ENSRNOT00000 015824.4	Hctr2	ENSRNOG00 000011251	hypocretin receptor 2 Source RGD Symbol Acc 2788
F01	SBR1207863	ENSRNOT00000 009775.4	Hrh1	ENSRNOG00 000007420	histamine receptor H 1 Source RGD Symbol Acc 2830
F02	SBR1144887	ENSRNOT00000 022744.4	Hrh4	ENSRNOG00 000016887	histamine receptor H4 Source RGD Symbol Acc 620631
F03	SBR1152900	ENSRNOT00000 013618.2	Htr1a	ENSRNOG00 000010254	5-hydroxytryptamine receptor 1A Source RGD Symbol Acc 2845
F04	SBR1104150	ENSRNOT00000 017411.3	Htr1b	ENSRNOG00 000013042	5-hydroxytryptamine receptor 1B Source RGD Symbol Acc 2846
F05	SBR1130762	ENSRNOT00000 016046.2	Htr1d	ENSRNOG00 000012038	5-hydroxytryptamine receptor 1D Source RGD Symbol Acc 2847
F06	SBR1141533	ENSRNOT00000 000907.5	Htr1f	ENSRNOG00 000000716	5-hydroxytryptamine receptor 1F Source RGD Symbol Acc 71083
F07	SBR1130221	ENSRNOT00000 013408.6	Htr2a	ENSRNOG00 000010063	5-hydroxytryptamine receptor 2A Source RGD Symbol Acc 61800
F08	SBR1201144	ENSRNOT00000 090922.1	Htr2c	ENSRNOG00 000030877	5-hydroxytryptamine receptor 2C Source RGD Symbol Acc 2848
F09	SBR1142571	ENSRNOT00000 008965.4	Htr3a	ENSRNOG00 000006595	5-hydroxytryptamine receptor 3A Source RGD Symbol Acc 61818
F10	SBR1149100	ENSRNOT00000 025892.5	Htr4	ENSRNOG00 000019134	5-hydroxytryptamine receptor 4 Source RGD Symbol Acc 2850

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1136033	ENSRNOT00000025493.7	Htr7	ENSRNOG0000018827	5-hydroxytryptamine receptor 7 Source RGD Symbol Acc 71034
F12	SBR1206097	ENSRNOT00000072029.2	Npy2r	ENSRNOG0000049213	neuropeptide Y receptor Y2 Source RGD Symbol Acc 620475
G01	SBR1189724	ENSRNOT00000018976.3	Npy5r	ENSRNOG0000014172	neuropeptide Y receptor Y5 Source RGD Symbol Acc 3199
G02	SBR1160683	ENSRNOT00000071387.2	Ntsr2	ENSRNOG0000049054	neurotensin receptor 2 Source RGD Symbol Acc 70962
G03	SBR1211478	ENSRNOT00000007724.2	Oxtr	ENSRNOG0000005806	oxytocin receptor Source RGD Symbol Acc 3239
G04	SBR1180551	ENSRNOT00000028889.2	Prokr2	ENSRNOG0000021266	prokineticin receptor 2 Source RGD Symbol Acc 708445
G05	SBR1100044	ENSRNOT00000072088.2	Sctr	ENSRNOG0000049766	secretin receptor Source RGD Symbol Acc 621342
G06	SBR1100510	ENSRNOT00000073970.2	Sstr1	ENSRNOG0000048145	somatostatin receptor 1 Source RGD Symbol Acc 3762
G07	SBR1198674	ENSRNOT00000003735.3	Sstr2	ENSRNOG0000002793	somatostatin receptor 2 Source RGD Symbol Acc 3763
G08	SBR1216177	ENSRNOT00000006181.6	Sstr4	ENSRNOG0000004641	somatostatin receptor 4 Source RGD Symbol Acc 3764
G09	SBR1116879	ENSRNOT00000007984.5	Tacr1	ENSRNOG0000005853	tachykinin receptor 1 Source RGD Symbol Acc 3811
G10	SBR1178603	ENSRNOT00000071394.1	Tacr2	ENSRNOG0000005058	tachykinin receptor 2 Source RGD Symbol Acc 3812
G11	SBR1170978	ENSRNOT00000012473.2	Tacr3	ENSRNOG0000009372	tachykinin receptor 3 Source RGD Symbol Acc 3810
G12	SBR1101780	ENSRNOT00000014089.4	Tspo	ENSRNOG0000010549	translocator protein Source RGD Symbol Acc 2228
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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