

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

## Rat Alzheimer's Disease

Cat. no. 249950 SBRN-057ZA

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>	LOC1009115 45	Abca1	Ache	Adam9	Apba1	Apba3	Apbb1	Apbb2	Aph1a	Aplp2	Apoa1	Apoe
<b>B</b>	App	Bace1	Bace2	Bche	Bdnf	Capn1	Casp3	Casp4	Cdk1	Cdk5	Cdkl1	Chat
<b>C</b>	Clu	Ctsb	Ctsc	Ctsd	Ctsg	Ctsl	AABR0705853 9.1	Gap43	Gnao1	Gnaz	Gnb1	Gnb2
<b>D</b>	Gnb4	Gnb5	Gng10	Gng11	Gng5	Gng7	Gng8	Gsk3a	Gsk3b	Hsd17b10	Ide	Igf2
<b>E</b>	Il1a	Il1b	Ins2	Insr	Lpl	Lrp1	Lrp6	Map2	Mapt	Mpo	Mt3	Nae1
<b>F</b>	Ncstn	Ndufb8	Plp4	Plat	Plau	Plg	Ppp3cc	Prkca	Prkcb	Prkcd	Prkce	Prkcg
<b>G</b>	Prkci	Prkq	Prkz	Psen1	Psen2	Serpina3c	LOC299282	Snca	Sncb	Ubqln1	Uqcr1	Uqcr2
<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	SBR1166452	ENSRNOT00000019346.6	LOC100911545	ENSRNOG0000028896	alpha-2-macroglobulin-like Source RGD Symbol Acc 6492449
A02	SBR1139590	ENSRNOT00000024564.7	Abca1	ENSRNOG0000018126	ATP binding cassette subfamily A member 1 Source RGD Symbol Acc 631344
A03	SBR1117859	ENSRNOT00000086915.1	Ache	ENSRNOG0000050841	acetylcholinesterase Source RGD Symbol Acc 69313
A04	SBR1159819	ENSRNOT00000041330.4	Adam9	ENSRNOG0000017231	ADAM metallopeptidase domain 9 Source RGD Symbol Acc 621473
A05	SBR1161316	ENSRNOT00000020123.4	Apba1	ENSRNOG0000014928	amyloid beta precursor protein binding family A member 1 Source RGD Symbol Acc 620844
A06	SBR1126731	ENSRNOT00000027784.4	Apba3	ENSRNOG0000020466	amyloid beta precursor protein binding family A member 3 Source RGD Symbol Acc 620846
A07	SBR1106924	ENSRNOT00000090181.1	Apbb1	ENSRNOG0000018020	amyloid beta precursor protein binding family B member 1 Source RGD Symbol Acc 2122
A08	SBR1100382	ENSRNOT00000050664.5	Apbb2	ENSRNOG0000025509	amyloid beta precursor protein binding family B member 2 Source RGD Symbol Acc 1562438
A09	SBR1127485	ENSRNOT00000081383.1	Aph1a	ENSRNOG0000023816	aph-1 homolog A, gamma secretase subunit Source RGD Symbol Acc 1311546
A10	SBR1125606	ENSRNOT00000074457.3	Aplp2	ENSRNOG0000047179	amyloid beta precursor like protein 2 Source RGD Symbol Acc 2128
A11	SBR1146824	ENSRNOT00000074357.2	Apoa1	ENSRNOG0000045679	apolipoprotein A1 Source RGD Symbol Acc 2130
A12	SBR1123572	ENSRNOT00000080453.1	ApoE	ENSRNOG0000018454	apolipoprotein E Source RGD Symbol Acc 2138
B01	SBR1129904	ENSRNOT00000048854.6	App	ENSRNOG0000006997	amyloid beta precursor protein Source RGD Symbol Acc 2139
B02	SBR1200624	ENSRNOT00000022796.6	Bace1	ENSRNOG0000016847	beta-secretase 1 Source RGD Symbol Acc 2191
B03	SBR1138973	ENSRNOT00000002679.7	Bace2	ENSRNOG0000001953	beta-secretase 2 Source RGD Symbol Acc 1303241
B04	SBR1147610	ENSRNOT00000013279.3	Bche	ENSRNOG0000009826	butyrylcholinesterase Source RGD Symbol Acc 619996
B05	SBR1172593	ENSRNOT00000083542.1	Bdnf	ENSRNOG0000047466	brain-derived neurotrophic factor Source RGD Symbol Acc 2202
B06	SBR1163286	ENSRNOT00000028431.6	Capn1	ENSRNOG0000020935	calpain 1 Source RGD Symbol Acc 2267
B07	SBR1123217	ENSRNOT00000014095.5	Casp3	ENSRNOG0000010475	caspase 3 Source RGD Symbol Acc 2275
B08	SBR1157462	ENSRNOT00000061973.4	Casp4	ENSRNOG0000003697	caspase 4 Source RGD Symbol Acc 621757
B09	SBR1169863	ENSRNOT00000081113.1	Cdk1	ENSRNOG0000000632	cyclin-dependent kinase 1 Source RGD Symbol Acc 2319
B10	SBR1180282	ENSRNOT000000111052.4	Cdk5	ENSRNOG0000008017	cyclin-dependent kinase 5 Source RGD Symbol Acc 70514
B11	SBR1171819	ENSRNOT00000006374.5	Cdk1l	ENSRNOG0000038720	cyclin dependent kinase like 1 Source RGD Symbol Acc 1305080
B12	SBR1117129	ENSRNOT00000034283.6	Chat	ENSRNOG0000025012	choline O-acetyltransferase Source RGD Symbol Acc 1304627
C01	SBR1134172	ENSRNOT00000078861.1	Clu	ENSRNOG0000016460	clusterin Source RGD Symbol Acc 3907
C02	SBR1215406	ENSRNOT00000014177.5	Ctsb	ENSRNOG0000010331	cathepsin B Source RGD Symbol Acc 621509
C03	SBR1180967	ENSRNOT00000022342.5	Ctsc	ENSRNOG0000016496	cathepsin C Source RGD Symbol Acc 2445
C04	SBR1121073	ENSRNOT00000027407.4	Ctsd	ENSRNOG0000020206	cathepsin D Source RGD Symbol Acc 621511
C05	SBR1152150	ENSRNOT00000059677.2	Ctsg	ENSRNOG0000020647	cathepsin G Source RGD Symbol Acc 1307681
C06	SBR1210366	ENSRNOT00000025462.6	Ctsl	ENSRNOG0000018566	cathepsin L Source RGD Symbol Acc 2448
C07	SBR1104886	ENSRNOT00000000206.7	AABR07058539.1	ENSRNOG0000000190	
C08	SBR1190228	ENSRNOT00000002091.4	Gap43	ENSRNOG0000001528	growth associated protein 43 Source RGD Symbol Acc 62071
C09	SBR1163670	ENSRNOT00000026373.5	Gnao1	ENSRNOG0000019482	G protein subunit alpha o1 Source RGD Symbol Acc 628732
C10	SBR1209994	ENSRNOT000000011779.4	Gnaz	ENSRNOG0000001313	G protein subunit alpha z Source RGD Symbol Acc 2717
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1205749	041789.2	Gnb1	000016638	G protein subunit beta 1 Source RGD Symbol Acc 2718
C12	SBR1207136	ENSRNOT0000001911.4	Gnb2	ENSRNOG0000001409	G protein subunit beta 2 Source RGD Symbol Acc 69319
D01	SBR1131598	ENSRNOT00000087803.1	Gnb4	ENSRNOG00000011070	G protein subunit beta 4 Source RGD Symbol Acc 1359321
D02	SBR1098713	ENSRNOT00000011963.6	Gnb5	ENSRNOG00000047799	G protein subunit beta 5 Source RGD Symbol Acc 620759
D03	SBR1139242	ENSRNOT00000020707.7	Gng10	ENSRNOG00000025040	G protein subunit gamma 10 Source RGD Symbol Acc 621514
D04	SBR1209692	ENSRNOT00000075326.2	Gng11	ENSRNOG00000047914	G protein subunit gamma 11 Source RGD Symbol Acc 621515
D05	SBR1130455	ENSRNOT00000021358.2	Gng5	ENSRNOG0000015936	guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma-5 Source RGD Symbol Acc 11485321
D06	SBR1125807	ENSRNOT00000026893.4	Gng7	ENSRNOG0000019857	G protein subunit gamma 7 Source RGD Symbol Acc 61860
D07	SBR1122434	ENSRNOT00000090417.1	Gng8	ENSRNOG0000016701	G protein subunit gamma 8 Source RGD Symbol Acc 620808
D08	SBR1194620	ENSRNOT00000027677.5	Gsk3a	ENSRNOG00000020417	glycogen synthase kinase 3 alpha Source RGD Symbol Acc 620351
D09	SBR1155736	ENSRNOT00000077612.1	Gsk3b	ENSRNOG00000002833	glycogen synthase kinase 3 beta Source RGD Symbol Acc 70982
D10	SBR1099274	ENSRNOT00000043559.4	Hsd17b10	ENSRNOG0000003049	hydroxysteroid (17-beta) dehydrogenase 10 Source RGD Symbol Acc 69231
D11	SBR1146755	ENSRNOT00000085303.1	Ide	ENSRNOG0000016833	insulin degrading enzyme Source RGD Symbol Acc 2861
D12	SBR1106101	ENSRNOT00000050760.3	Igf2	ENSRNOG00000020369	insulin-like growth factor 2 Source RGD Symbol Acc 2870
E01	SBR1106125	ENSRNOT00000006113.8	Il1a	ENSRNOG00000004575	interleukin 1 alpha Source RGD Symbol Acc 2890
E02	SBR1196387	ENSRNOT00000006308.4	Il1b	ENSRNOG00000004649	interleukin 1 beta Source RGD Symbol Acc 2891
E03	SBR1158339	ENSRNOT00000027656.3	Ins2	ENSRNOG00000020405	insulin 2 Source RGD Symbol Acc 2916
E04	SBR1131460	ENSRNOT00000041155.3	Insr	ENSRNOG00000029986	insulin receptor Source RGD Symbol Acc 2917
E05	SBR1197775	ENSRNOT00000016543.3	Lpl	ENSRNOG0000012181	lipoprotein lipase Source RGD Symbol Acc 3017
E06	SBR1203456	ENSRNOT00000031005.5	Lrp1	ENSRNOG00000025053	LDL receptor related protein 1 Source RGD Symbol Acc 1307535
E07	SBR1122227	ENSRNOT00000082102.1	Lrp6	ENSRNOG00000006338	LDL receptor related protein 6 Source RGD Symbol Acc 1304749
E08	SBR1110892	ENSRNOT00000092445.1	Map2	ENSRNOG00000011841	microtubule-associated protein 2 Source RGD Symbol Acc 3044
E09	SBR1202634	ENSRNOT00000042984.5	Mapt	ENSRNOG00000005133	microtubule-associated protein tau Source RGD Symbol Acc 69329
E10	SBR1165540	ENSRNOT00000081951.1	Mpo	ENSRNOG00000008310	myeloperoxidase Source RGD Symbol Acc 1592081
E11	SBR1182586	ENSRNOT00000025669.5	Mt3	ENSRNOG0000018958	metallothionein 3 Source RGD Symbol Acc 621252
E12	SBR1214567	ENSRNOT00000048221.3	Nae1	ENSRNOG00000033133	NEDD8 activating enzyme E1 subunit 1 Source RGD Symbol Acc 619945
F01	SBR1175821	ENSRNOT00000008150.5	Ncstn	ENSRNOG00000005355	nicastrin Source RGD Symbol Acc 631418
F02	SBR1128458	ENSRNOT00000019039.7	Ndufb8	ENSRNOG0000014078	NADH ubiquinone oxidoreductase subunit B8 Source RGD Symbol Acc 1309129
F03	SBR1131592	ENSRNOT00000059246.5	Pkp4	ENSRNOG0000005504	plakophilin 4 Source RGD Symbol Acc 1307840
F04	SBR1162717	ENSRNOT00000025763.6	Plat	ENSRNOG0000019018	plasminogen activator, tissue type Source RGD Symbol Acc 3342
F05	SBR1186883	ENSRNOT00000014273.5	Plau	ENSRNOG0000010516	plasminogen activator, urokinase Source RGD Symbol Acc 3343
F06	SBR1165120	ENSRNOT00000080352.1	Plg	ENSRNOG0000017223	plasminogen Source RGD Symbol Acc 619893
F07	SBR1105094	ENSRNOT00000082505.1	Ppp3cc	ENSRNOG00000009745	protein phosphatase 3 catalytic subunit gamma Source RGD Symbol Acc 621616
F08	SBR1097570	ENSRNOT00000055073.4	Prkca	ENSRNOG00000003491	protein kinase C, alpha Source RGD Symbol Acc 3395
F09	SBR1121471	ENSRNOT00000016418.6	Prkcb	ENSRNOG0000012061	protein kinase C, beta Source RGD Symbol Acc 3396
F10	SBR1205058	ENSRNOT00000025858.7	Prkcd	ENSRNOG0000016346	protein kinase C, delta Source RGD Symbol Acc 67383

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1097999	ENSRNOT00000020959.7	Prkce	ENSRNOG0000015603	protein kinase C, epsilon Source RGD Symbol Acc 61925
F12	SBR1199108	ENSRNOT00000080032.1	Prkcg	ENSRNOG0000054371	protein kinase C, gamma Source RGD Symbol Acc 3397
G01	SBR1149371	ENSRNOT00000012924.5	Prkci	ENSRNOG0000009652	protein kinase C, iota Source RGD Symbol Acc 620961
G02	SBR1175970	ENSRNOT00000025901.6	Prkcg	ENSRNOG0000019057	protein kinase C, theta Source RGD Symbol Acc 620968
G03	SBR1208170	ENSRNOT00000021285.6	Prkcz	ENSRNOG0000015480	protein kinase C, zeta Source RGD Symbol Acc 3399
G04	SBR1180916	ENSRNOT00000012495.7	Psen1	ENSRNOG0000009110	presenilin 1 Source RGD Symbol Acc 3425
G05	SBR1213143	ENSRNOT00000040203.4	Psen2	ENSRNOG0000002879	presenilin 2 Source RGD Symbol Acc 621060
G06	SBR1174249	ENSRNOT00000013896.4	Serpina3c	ENSRNOG0000010410	serine (or cysteine) proteinase inhibitor, clade A, member 3C Source RGD Symbol Acc 2972
G07	SBR1203327	ENSRNOT00000014073.5	LOC299282	ENSRNOG0000010478	Serine protease inhibitor Source RGD Symbol Acc 3745
G08	SBR1121544	ENSRNOT00000039247.4	Snca	ENSRNOG0000008656	synuclein alpha Source RGD Symbol Acc 3729
G09	SBR1122151	ENSRNOT00000024357.6	Sncb	ENSRNOG0000018039	synuclein, beta Source RGD Symbol Acc 70992
G10	SBR1095946	ENSRNOT00000061233.4	Ubqln1	ENSRNOG0000019282	ubiquilin 1 Source RGD Symbol Acc 620745
G11	SBR1141238	ENSRNOT00000042114.4	Uqcrc1	ENSRNOG0000032134	ubiquinol-cytochrome c reductase core protein 1 Source RGD Symbol Acc 1303314
G12	SBR1142799	ENSRNOT00000021514.5	Uqcrc2	ENSRNOG0000036742	ubiquinol cytochrome c reductase core protein 2 Source RGD Symbol Acc 1359150
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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