

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

## Rat EGF / PDGF Signaling Pathway

Cat. no. 249950 SBRN-040ZR

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	Actr2	Akt1	Akt2	Akt3	Araf	Aif1	Aif2	Bad	Bcar1	Bcl2	Braf	Casp3
B	Casp9	Cblb	Cnd1	Chuk	Colla1	Creb1	Csnk2a1	Csnk2b	Dusp1	Dusp6	Egf	Egfr
C	Egr1	Eif4e	Eps8	Faslg	Fn1	Fos	Foxo3	Gab1	Grb2	Gsk3a	Gsk3b	Hbegf
D	Hras	Ikbkb	Il2	Jak1	Jun	Kcrnb	Kras	Lta	Map2k1	Map2k4	Map2k7	Map3k2
E	Mapk1	Mapk10	Mapk3	Mapk8	Mapk9	Mknk1	Mmp7	Nck2	Nfatc3	Nfkb1	Nras	Nup62
F	Pdgfa	Pdgfb	Pdgfra	Pdpk1	Pik3ca	Pik3r1	Pik3r2	Plat	Plcg1	LOC103694903	Prkca	Pten
G	Raf1	Rap1a	Rasa1	Rhoa	Rps6ka5	Rps6kb1	Shc1	Src	Stat1	Stat3	Stat5a	Tp53
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	SBR1106457	ENSRNOT00000006607.5	Acr2	ENSRNOG0000004959	ARP2 actin related protein 2 homolog Source RGD Symbol Acc 1310826
A02	SBR1163078	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A03	SBR1190995	ENSRNOT00000025303.3	Akt2	ENSRNOG0000018677	AKT serine/threonine kinase 2 Source RGD Symbol Acc 2082
A04	SBR1132835	ENSRNOT00000085648.1	Akt3	ENSRNOG0000021497	AKT serine/threonine kinase 3 Source RGD Symbol Acc 62390
A05	SBR1213100	ENSRNOT00000039911.3	Araf	ENSRNOG0000010838	A-Raf proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 2148
A06	SBR1105972	ENSRNOT00000087298.1	Atf1	ENSRNOG0000061088	activating transcription factor 1 Source RGD Symbol Acc 1307360
A07	SBR1207469	ENSRNOT00000002174.7	Atf2	ENSRNOG0000001597	activating transcription factor 2 Source RGD Symbol Acc 621862
A08	SBR1106737	ENSRNOT00000028712.5	Bad	ENSRNOG0000021147	BCL2-associated agonist of cell death Source RGD Symbol Acc 620103
A09	SBR1129792	ENSRNOT00000058891.4	Bcar1	ENSRNOG0000019253	BCAR1, Cas family scaffold protein Source RGD Symbol Acc 2406
A10	SBR1170984	ENSRNOT00000003768.2	Bcl2	ENSRNOG0000002791	BCL2, apoptosis regulator Source RGD Symbol Acc 2199
A11	SBR1148348	ENSRNOT00000014604.7	Braf	ENSRNOG0000010957	B-Raf proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 619908
A12	SBR1123217	ENSRNOT00000014095.5	Casp3	ENSRNOG0000010475	caspase 3 Source RGD Symbol Acc 2275
B01	SBR1175310	ENSRNOT00000085378.1	Casp9	ENSRNOG0000012944	caspase 9 Source RGD Symbol Acc 61867
B02	SBR1160373	ENSRNOT00000077220.1	Cblb	ENSRNOG0000001982	Cbl proto-oncogene B Source RGD Symbol Acc 620535
B03	SBR1211432	ENSRNOT00000028411.3	Ccnd1	ENSRNOG0000020918	cyclin D1 Source RGD Symbol Acc 68384
B04	SBR1132111	ENSRNOT00000030782.4	Chuk	ENSRNOG0000022485	conserved helix-loop-helix ubiquitous kinase Source RGD Symbol Acc 1306661
B05	SBR1113220	ENSRNOT00000005311.6	Col1a1	ENSRNOG0000003897	collagen type I alpha 1 chain Source RGD Symbol Acc 61817
B06	SBR1179341	ENSRNOT00000049654.4	Creb1	ENSRNOG0000013412	cAMP responsive element binding protein 1 Source RGD Symbol Acc 620218
B07	SBR1124723	ENSRNOT00000007558.5	Csnk2a1	ENSRNOG0000005276	casein kinase 2 alpha 1 Source RGD Symbol Acc 621663
B08	SBR1127266	ENSRNOT00000076528.1	Csnk2b	ENSRNOG0000000847	casein kinase 2 beta Source RGD Symbol Acc 619978
B09	SBR1102337	ENSRNOT00000005383.5	Dusp1	ENSRNOG0000003977	dual specificity phosphatase 1 Source RGD Symbol Acc 620897
B10	SBR1168195	ENSRNOT00000037844.3	Dusp6	ENSRNOG0000023896	dual specificity phosphatase 6 Source RGD Symbol Acc 70978
B11	SBR1200927	ENSRNOT00000087007.1	Egf	ENSRNOG0000053979	epidermal growth factor Source RGD Symbol Acc 2542
B12	SBR1196436	ENSRNOT00000006087.2	Egfr	ENSRNOG0000004332	epidermal growth factor receptor Source RGD Symbol Acc 2543
C01	SBR1216566	ENSRNOT00000026303.4	Egr1	ENSRNOG0000019422	early growth response 1 Source RGD Symbol Acc 2544
C02	SBR1151863	ENSRNOT00000090526.2	Eif4e	ENSRNOG0000052343	eukaryotic translation initiation factor 4E Source RGD Symbol Acc 69647
C03	SBR1133190	ENSRNOT00000009328.7	Eps8	ENSRNOG0000007047	epidermal growth factor receptor pathway substrate 8 Source RGD Symbol Acc 1310590
C04	SBR1097457	ENSRNOT00000003998.2	Faslg	ENSRNOG0000002978	Fas ligand Source RGD Symbol Acc 3880
C05	SBR1178912	ENSRNOT00000019772.6	Fn1	ENSRNOG0000014288	fibronectin 1 Source RGD Symbol Acc 2624
C06	SBR1110295	ENSRNOT00000010712.3	Fos	ENSRNOG0000008015	Fos proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2626
C07	SBR1161322	ENSRNOT00000000327.5	Foxo3	ENSRNOG0000000299	forkhead box O3 Source RGD Symbol Acc 1309196
C08	SBR1117324	ENSRNOT00000083219.1	Gab1	ENSRNOG0000017879	GRB2-associated binding protein 1 Source RGD Symbol Acc 1311085
C09	SBR1181692	ENSRNOT00000005347.5	Grb2	ENSRNOG0000003990	growth factor receptor bound protein 2 Source RGD Symbol Acc 619758
C10	SBR1194620	ENSRNOT00000027677.5	Gsk3a	ENSRNOG0000020417	glycogen synthase kinase 3 alpha Source RGD Symbol Acc 620351
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1155736	077612.1	Gsk3b	000002833	glycogen synthase kinase 3 beta Source RGD Symbol Acc 70982
C12	SBR1150704	ENSRNOT00000 025157.6	Hbegf	ENSRNOG00 000018646	heparin-binding EGF-like growth factor Source RGD Symbol Acc 2526
D01	SBR1204952	ENSRNOT00000 079464.1	Hras	ENSRNOG00 000016611	Hras proto-oncogene, GTPase Source RGD Symbol Acc 2827
D02	SBR1133299	ENSRNOT00000 025851.4	Ikbbk	ENSRNOG00 000019073	inhibitor of nuclear factor kappa B kinase subunit beta Source RGD Symbol Acc 621375
D03	SBR1102170	ENSRNOT00000 023327.2	Il2	ENSRNOG00 000017348	interleukin 2 Source RGD Symbol Acc 620047
D04	SBR1138663	ENSRNOT00000 064542.1	Jak1	ENSRNOG00 000011157	Janus kinase 1 Source RGD Symbol Acc 69056
D05	SBR1133226	ENSRNOT00000 011731.3	Jun	ENSRNOG00 000026293	Jun proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2943
D06	SBR1149643	ENSRNOT00000 087331.1	Kcnh8	ENSRNOG00 000058626	potassium voltage-gated channel subfamily H member 8 Source RGD Symbol Acc 2549
D07	SBR1196578	ENSRNOT00000 012588.4	Kras	ENSRNOG00 000009338	KRAS proto-oncogene, GTPase Source RGD Symbol Acc 2981
D08	SBR1181153	ENSRNOT00000 088936.1	Lta	ENSRNOG00 000000838	lymphotoxin alpha Source RGD Symbol Acc 3020
D09	SBR1111011	ENSRNOT00000 013933.6	Map2k1	ENSRNOG00 000010176	mitogen activated protein kinase kinase 1 Source RGD Symbol Acc 70495
D10	SBR1195777	ENSRNOT00000 005293.7	Map2k4	ENSRNOG00 000003834	mitogen activated protein kinase kinase 4 Source RGD Symbol Acc 1307040
D11	SBR1157341	ENSRNOT00000 084460.1	Map2k7	ENSRNOG00 000001047	mitogen activated protein kinase kinase 7 Source RGD Symbol Acc 1560043
D12	SBR1190201	ENSRNOT00000 060996.3	Map3k2	ENSRNOG00 000014089	mitogen activated protein kinase kinase 2 Source RGD Symbol Acc 620967
E01	SBR1202944	ENSRNOT00000 002533.7	Mapk1	ENSRNOG00 000001849	mitogen activated protein kinase 1 Source RGD Symbol Acc 70500
E02	SBR1165034	ENSRNOT00000 092395.1	Mapk10	ENSRNOG00 000002079	mitogen activated protein kinase 10 Source RGD Symbol Acc 3663
E03	SBR1209281	ENSRNOT00000 087625.1	Mapk3	ENSRNOG00 000053583	mitogen activated protein kinase 3 Source RGD Symbol Acc 3046
E04	SBR1144517	ENSRNOT00000 065216.3	Mapk8	ENSRNOG00 000020155	mitogen-activated protein kinase 8 Source RGD Symbol Acc 621506
E05	SBR1169613	ENSRNOT00000 004010.4	Mapk9	ENSRNOG00 000002823	mitogen-activated protein kinase 9 Source RGD Symbol Acc 628847
E06	SBR1200345	ENSRNOT00000 091543.1	Mknk1	ENSRNOG00 000010381	MAP kinase-interacting serine/threonine kinase 1 Source RGD Symbol Acc 1559603
E07	SBR1116320	ENSRNOT00000 014041.5	Mmp7	ENSRNOG00 000010507	matrix metalloproteinase 7 Source RGD Symbol Acc 3100
E08	SBR1165392	ENSRNOT00000 023029.7	Nck2	ENSRNOG00 000017155	NCK adaptor protein 2 Source RGD Symbol Acc 1305965
E09	SBR1158204	ENSRNOT00000 089783.1	Nfatc3	ENSRNOG00 000054264	nuclear factor of activated T-cells 3 Source RGD Symbol Acc 1308692
E10	SBR1111134	ENSRNOT00000 036838.4	Nfkb1	ENSRNOG00 000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
E11	SBR1160671	ENSRNOT00000 039572.3	Nras	ENSRNOG00 000023079	NRAS proto-oncogene, GTPase Source RGD Symbol Acc 3205
E12	SBR1124837	ENSRNOT00000 074847.2	Nup62	ENSRNOG00 000048733	nucleoporin 62 Source RGD Symbol Acc 619938
F01	SBR1210315	ENSRNOT00000 042117.6	Pdgfa	ENSRNOG00 000001312	platelet derived growth factor subunit A Source RGD Symbol Acc 3282
F02	SBR1132695	ENSRNOT00000 023196.5	Pdgfb	ENSRNOG00 000017197	platelet derived growth factor subunit B Source RGD Symbol Acc 3283
F03	SBR1195557	ENSRNOT00000 003077.5	Pdgfra	ENSRNOG00 000002244	platelet derived growth factor receptor alpha Source RGD Symbol Acc 3284
F04	SBR1133385	ENSRNOT00000 067660.1	Pdpk1	ENSRNOG00 000006136	3-phosphoinositide dependent protein kinase-1 Source RGD Symbol Acc 620307
F05	SBR1193587	ENSRNOT00000 083720.1	Pik3ca	ENSRNOG00 000056371	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha Source RGD Symbol Acc 620916
F06	SBR1155861	ENSRNOT00000 025687.7	Pik3r1	ENSRNOG00 000018903	phosphoinositide-3-kinase regulatory subunit 1 Source RGD Symbol Acc 3329
F07	SBR1151465	ENSRNOT00000 026210.5	Pik3r2	ENSRNOG00 000019228	phosphoinositide-3-kinase regulatory subunit 2 Source RGD Symbol Acc 68341
F08	SBR1162717	ENSRNOT00000 025763.6	Plat	ENSRNOG00 000019018	plasminogen activator, tissue type Source RGD Symbol Acc 3342
F09	SBR1124010	ENSRNOT00000 078909.1	Plcg1	ENSRNOG00 000051490	phospholipase C, gamma 1 Source RGD Symbol Acc 3347
F10	SBR1176421	ENSRNOT00000 007621.5	LOC10369 4903	ENSRNOG00 000005389	serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform Source RGD Symbol Acc 9257421

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1097570	ENSRNOT00000055073.4	Prkca	ENSRNOG0000003491	protein kinase C, alpha Source RGD Symbol Acc 3395
F12	SBR1174124	ENSRNOT00000028143.3	Pten	ENSRNOG0000020723	phosphatase and tensin homolog Source RGD Symbol Acc 61995
G01	SBR1111289	ENSRNOT00000013831.6	Raf1	ENSRNOG0000010153	Raf-1 proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 3531
G02	SBR1188580	ENSRNOT00000047836.4	Rap1a	ENSRNOG0000032463	RAP1A, member of RAS oncogene family Source RGD Symbol Acc 1359694
G03	SBR1192086	ENSRNOT00000046251.2	Rasa1	ENSRNOG0000029185	RAS p21 protein activator 1 Source RGD Symbol Acc 3537
G04	SBR1125110	ENSRNOT00000071664.2	Rhoa	ENSRNOG0000050519	ras homolog family member A Source RGD Symbol Acc 619921
G05	SBR1117694	ENSRNOT00000064716.2	Rps6ka5	ENSRNOG0000004362	ribosomal protein S6 kinase A5 Source RGD Symbol Acc 1308336
G06	SBR1105085	ENSRNOT00000005226.4	Rps6kb1	ENSRNOG0000003919	ribosomal protein S6 kinase B1 Source RGD Symbol Acc 620683
G07	SBR1136735	ENSRNOT00000056652.4	Shc1	ENSRNOG0000020657	SHC adaptor protein 1 Source RGD Symbol Acc 620446
G08	SBR1192294	ENSRNOT00000012739.4	Src	ENSRNOG0000009495	SRC proto-oncogene, non-receptor tyrosine kinase Source RGD Symbol Acc 620795
G09	SBR1199428	ENSRNOT00000080522.1	Stat1	ENSRNOG0000014079	signal transducer and activator of transcription 4 Source RGD Symbol Acc 1305747
G10	SBR1138417	ENSRNOT00000026760.4	Stat3	ENSRNOG0000019742	signal transducer and activator of transcription 3 Source RGD Symbol Acc 3772
G11	SBR1147063	ENSRNOT00000026662.3	Stat5a	ENSRNOG0000019496	signal transducer and activator of transcription 5A Source RGD Symbol Acc 3773
G12	SBR1172374	ENSRNOT00000046490.3	Tp53	ENSRNOG0000010756	tumor protein p53 Source RGD Symbol Acc 3889
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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