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

Rat Insulin Signaling Pathway

Cat. no. 249950 SBRN-030ZR

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** for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Acaca	Acox1	Adra1d	Aebp1	Akt1	Akt2	Akt3	Araf	Bcl2l1	Braf	Cap1	Cbl
B	Cebpa	Cebpb	Cfd	Dok1	Dok2	Dok3	Dusp14	Eif2b1	Eif4ebp1	Ercc1	Fasn	Fbp1
C	Fos	Frs2	Frs3	G6pc	Gab1	Gcg	Gck	Gpd1	Grb10	Grb2	Gsk3b	Hk2
D	Hras	Igf1r	Igf2	Igfbp1	Ins1	Ins2	Insl3	Insr	Irs1	Irs2	Jun	Klf10
E	Kras	Ldlr	Lep	Map2k1	Mapk1	Mtor	Nos2	LOC100912228	Pck2	Pdpk1	Pik3ca	Pik3cb
F	Pik3r1	Pik3r2	Pklr	Pparg	Ppp1ca	Prkcg	Prkcz	Prl	Ptpn1	Raf1	Retn	Rps6ka1
G	Rras	Rras2	Serpine1	Shc1	Slc27a4	Slc2a1	Slc2a4	Sos1	Srebf1	Tg	Ucp1	Vegfa
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	SBR1187866	ENSRNOT00000088138.1	Acaca	ENSRNOG00000034013	acetyl-CoA carboxylase alpha Source RGD Symbol Acc 621248
A02	SBR1129649	ENSRNOT00000042372.6	Acox1	ENSRNOG00000008755	acyl-CoA oxidase 1 Source RGD Symbol Acc 619757
A03	SBR1115374	ENSRNOT00000028877.2	Adra1d	ENSRNOG00000021256	adrenoceptor alpha 1D Source RGD Symbol Acc 62064
A04	SBR1096998	ENSRNOT00000018846.6	Aebp1	ENSRNOG00000013720	AE binding protein 1 Source RGD Symbol Acc 1306922
A05	SBR1163078	ENSRNOT00000031164.3	Akt1	ENSRNOG00000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A06	SBR1190995	ENSRNOT00000025303.3	Akt2	ENSRNOG00000018677	AKT serine/threonine kinase 2 Source RGD Symbol Acc 2082
A07	SBR1132835	ENSRNOT00000085648.1	Akt3	ENSRNOG00000021497	AKT serine/threonine kinase 3 Source RGD Symbol Acc 62390
A08	SBR1213100	ENSRNOT00000039911.3	Araf	ENSRNOG00000010838	A-Raf proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 2148
A09	SBR1205791	ENSRNOT00000010762.7	Bcl2l1	ENSRNOG00000007946	Bcl2-like 1 Source RGD Symbol Acc 2200
A10	SBR1148348	ENSRNOT00000014604.7	Braf	ENSRNOG00000010957	B-Raf proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 619908
A11	SBR1155484	ENSRNOT00000018711.4	Cap1	ENSRNOG00000013492	cyclase associated actin cytoskeleton regulatory protein 1 Source RGD Symbol Acc 620309
A12	SBR1169005	ENSRNOT00000067902.3	Cbl	ENSRNOG00000008444	Cbl proto-oncogene Source RGD Symbol Acc 1561386
B01	SBR1144323	ENSRNOT00000014517.5	Cebpa	ENSRNOG00000010918	CCAAT/enhancer binding protein alpha Source RGD Symbol Acc 2326
B02	SBR1114232	ENSRNOT00000083876.1	Cebpb	ENSRNOG00000057347	CCAAT/enhancer binding protein beta Source RGD Symbol Acc 2327
B03	SBR1215139	ENSRNOT00000015029.4	Cfd	ENSRNOG00000033564	complement factor D Source RGD Symbol Acc 2498
B04	SBR1214627	ENSRNOT00000010020.4	Dok1	ENSRNOG00000007412	docking protein 1 Source RGD Symbol Acc 1309499
B05	SBR1210128	ENSRNOT00000018725.6	Dok2	ENSRNOG00000013922	docking protein 2 Source RGD Symbol Acc 1310966
B06	SBR1167810	ENSRNOT00000018232.4	Dok3	ENSRNOG00000013564	docking protein 3 Source RGD Symbol Acc 1311840
B07	SBR1132043	ENSRNOT00000043148.6	Dusp14	ENSRNOG00000030091	dual specificity phosphatase 14 Source RGD Symbol Acc 1307415
B08	SBR1215187	ENSRNOT00000092416.1	Eif2b1	ENSRNOG00000001039	eukaryotic translation initiation factor 2B subunit alpha Source RGD Symbol Acc 620819
B09	SBR1186274	ENSRNOT00000016885.5	Eif4ebp1	ENSRNOG00000012582	eukaryotic translation initiation factor 4E binding protein 1 Source RGD Symbol Acc 620259
B10	SBR1128428	ENSRNOT00000024113.5	Ercc1	ENSRNOG00000017839	ERCC excision repair 1, endonuclease non-catalytic subunit Source RGD Symbol Acc 1306992
B11	SBR1216475	ENSRNOT00000073321.2	Fasn	ENSRNOG00000045636	fatty acid synthase Source RGD Symbol Acc 620665
B12	SBR1097930	ENSRNOT00000023685.6	Fbp1	ENSRNOG00000017597	fructose-bisphosphatase 1 Source RGD Symbol Acc 2595
C01	SBR1110295	ENSRNOT00000010712.3	Fos	ENSRNOG00000008015	Fos proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2626
C02	SBR1197544	ENSRNOT00000080983.1	Frs2	ENSRNOG00000005642	fibroblast growth factor receptor substrate 2 Source RGD Symbol Acc 1308201
C03	SBR1123626	ENSRNOT00000019404.4	Frs3	ENSRNOG00000014328	fibroblast growth factor receptor substrate 3 Source RGD Symbol Acc 1310226
C04	SBR1115882	ENSRNOT00000028033.6	G6pc	ENSRNOG00000051171	glucose-6-phosphatase, catalytic subunit Source RGD Symbol Acc 2644
C05	SBR1117324	ENSRNOT00000083219.1	Gab1	ENSRNOG00000017879	GRB2-associated binding protein 1 Source RGD Symbol Acc 1311085
C06	SBR1140458	ENSRNOT00000007356.4	Gcg	ENSRNOG00000005498	glucagon Source RGD Symbol Acc 2668
C07	SBR1114343	ENSRNOT00000080147.1	Gck	ENSRNOG00000061527	glucokinase Source RGD Symbol Acc 2670
C08	SBR1212899	ENSRNOT00000087662.1	Gpd1	ENSRNOG00000056457	glycerol-3-phosphate dehydrogenase 1 Source RGD Symbol Acc 621381
C09	SBR1202533	ENSRNOT00000085175.1	Grb10	ENSRNOG00000004290	growth factor receptor bound protein 10 Source RGD Symbol Acc 1566234
C10	SBR1181692	ENSRNOT00000005347.5	Grb2	ENSRNOG00000003990	growth factor receptor bound protein 2 Source RGD Symbol Acc 619758
		ENSRNOT00000		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	SBR1148823	ENSRNOT00000 008813.3	Hk2	ENSRNOG00 000006116	hexokinase 2 Source RGD Symbol Acc 2797
D01	SBR1204952	ENSRNOT00000 079464.1	Hras	ENSRNOG00 000016611	HRas proto-oncogene, GTPase Source RGD Symbol Acc 2827
D02	SBR1109208	ENSRNOT00000 019267.6	Igf1r	ENSRNOG00 000014187	insulin-like growth factor 1 receptor Source RGD Symbol Acc 2869
D03	SBR1106101	ENSRNOT00000 050760.3	Igf2	ENSRNOG00 000020369	insulin-like growth factor 2 Source RGD Symbol Acc 2870
D04	SBR1203028	ENSRNOT00000 077177.1	Igfbp1	ENSRNOG00 000058780	insulin-like growth factor binding protein 1 Source RGD Symbol Acc 2872
D05	SBR1148811	ENSRNOT00000 016052.5	Ins1	ENSRNOG00 000012052	insulin 1 Source RGD Symbol Acc 2915
D06	SBR1158339	ENSRNOT00000 027656.3	Ins2	ENSRNOG00 000020405	insulin 2 Source RGD Symbol Acc 2916
D07	SBR1131137	ENSRNOT00000 025347.4	Insl3	ENSRNOG00 000018757	insulin-like 3 Source RGD Symbol Acc 620117
D08	SBR1131460	ENSRNOT00000 041155.3	Insr	ENSRNOG00 000029986	insulin receptor Source RGD Symbol Acc 2917
D09	SBR1132302	ENSRNOT00000 019579.5	Irs1	ENSRNOG00 000014597	insulin receptor substrate 1 Source RGD Symbol Acc 2922
D10	SBR1110764	ENSRNOT00000 032918.6	Irs2	ENSRNOG00 000023509	insulin receptor substrate 2 Source RGD Symbol Acc 69316
D11	SBR1133226	ENSRNOT00000 011731.3	Jun	ENSRNOG00 000026293	Jun proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2943
D12	SBR1192101	ENSRNOT00000 008350.3	Klf10	ENSRNOG00 000006118	Kruppel-like factor 10 Source RGD Symbol Acc 621652
E01	SBR1196578	ENSRNOT00000 012588.4	Kras	ENSRNOG00 000009338	KRAS proto-oncogene, GTPase Source RGD Symbol Acc 2981
E02	SBR1193091	ENSRNOT00000 013496.3	Ldlr	ENSRNOG00 000009946	low density lipoprotein receptor Source RGD Symbol Acc 2998
E03	SBR1209536	ENSRNOT00000 071926.1	Lep	ENSRNOG00 000045797	leptin Source RGD Symbol Acc 3000
E04	SBR1111011	ENSRNOT00000 013933.6	Map2k1	ENSRNOG00 000010176	mitogen activated protein kinase kinase 1 Source RGD Symbol Acc 70495
E05	SBR1202944	ENSRNOT00000 002533.7	Mapk1	ENSRNOG00 000001849	mitogen activated protein kinase 1 Source RGD Symbol Acc 70500
E06	SBR1220576	ENSRNOT00000 014167.7	Mtor	ENSRNOG00 000009615	mechanistic target of rapamycin kinase Source RGD Symbol Acc 68371
E07	SBR1197401	ENSRNOT00000 073138.2	Nos2	ENSRNOG00 000057443	similar to Nitric oxide synthase, inducible (NOS type II) (Inducible NO synthase) (Inducible NOS) (iNOS) Source RGD Symbol Acc 1598227
E08	SBR1096384	ENSRNOT00000 013145.6	LOC10091 2228	ENSRNOG00 000009768	neuropeptide Y Source RGD Symbol Acc 3197
E09	SBR1137508	ENSRNOT00000 025260.7	Pck2	ENSRNOG00 000018536	phosphoenolpyruvate carboxykinase 2 (mitochondrial) Source MGI Symbol Acc MGI 1860456
E10	SBR1133385	ENSRNOT00000 067660.1	Pdpk1	ENSRNOG00 000006136	3-phosphoinositide dependent protein kinase-1 Source RGD Symbol Acc 620307
E11	SBR1193587	ENSRNOT00000 083720.1	Pik3ca	ENSRNOG00 000056371	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha Source RGD Symbol Acc 620916
E12	SBR1157450	ENSRNOT00000 022179.4	Pik3cb	ENSRNOG00 000016384	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit beta Source RGD Symbol Acc 620917
F01	SBR1155861	ENSRNOT00000 025687.7	Pik3r1	ENSRNOG00 000018903	phosphoinositide-3-kinase regulatory subunit 1 Source RGD Symbol Acc 3329
F02	SBR1151465	ENSRNOT00000 026210.5	Pik3r2	ENSRNOG00 000019228	phosphoinositide-3-kinase regulatory subunit 2 Source RGD Symbol Acc 68341
F03	SBR1145166	ENSRNOT00000 027700.6	Pklr	ENSRNOG00 000020420	pyruvate kinase L/R Source RGD Symbol Acc 3336
F04	SBR1131520	ENSRNOT00000 082969.1	Pparg	ENSRNOG00 000008839	peroxisome proliferator-activated receptor gamma Source RGD Symbol Acc 3371
F05	SBR1178200	ENSRNOT00000 091680.1	Ppp1ca	ENSRNOG00 000018708	protein phosphatase 1 catalytic subunit alpha Source RGD Symbol Acc 3375
F06	SBR1199108	ENSRNOT00000 080032.1	Prkcg	ENSRNOG00 000054371	protein kinase C, gamma Source RGD Symbol Acc 3397
F07	SBR1208170	ENSRNOT00000 021285.6	Prkcz	ENSRNOG00 000015480	protein kinase C, zeta Source RGD Symbol Acc 3399
F08	SBR1190561	ENSRNOT00000 023412.4	Prl	ENSRNOG00 000017374	prolactin Source RGD Symbol Acc 3403
F09	SBR1146496	ENSRNOT00000 014309.4	Ptpn1	ENSRNOG00 000010574	protein tyrosine phosphatase, non-receptor type 1 Source RGD Symbol Acc 61965
F10	SBR1111289	ENSRNOT00000 013831.6	Raf1	ENSRNOG00 000010153	Raf-1 proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 3531

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1120413	ENSRNOT00000091197.1	Retn	ENSRNOG00000001001	resistin Source RGD Symbol Acc 628781
F12	SBR1200224	ENSRNOT00000077248.1	Rps6ka1	ENSRNOG00000042411	ribosomal protein S6 kinase A1 Source RGD Symbol Acc 620675
G01	SBR1175859	ENSRNOT00000027809.7	Rras	ENSRNOG00000037247	RAS related Source RGD Symbol Acc 1311443
G02	SBR1128285	ENSRNOT00000017199.5	Rras2	ENSRNOG00000012258	RAS related 2 Source RGD Symbol Acc 1310793
G03	SBR1126485	ENSRNOT00000001916.2	Serpine1	ENSRNOG00000001414	serpin family E member 1 Source RGD Symbol Acc 3249
G04	SBR1136735	ENSRNOT00000056652.4	Shc1	ENSRNOG00000020657	SHC adaptor protein 1 Source RGD Symbol Acc 620446
G05	SBR1212504	ENSRNOT00000019500.6	Slc27a4	ENSRNOG00000014369	solute carrier family 27 member 4 Source RGD Symbol Acc 1307383
G06	SBR1109042	ENSRNOT00000064452.2	Slc2a1	ENSRNOG00000007284	solute carrier family 2 member 1 Source RGD Symbol Acc 3704
G07	SBR1096562	ENSRNOT00000023256.5	Slc2a4	ENSRNOG00000017226	solute carrier family 2 member 4 Source RGD Symbol Acc 2711
G08	SBR1106511	ENSRNOT00000009359.7	Sos1	ENSRNOG00000007106	SOS Ras/Rac guanine nucleotide exchange factor 1 Source RGD Symbol Acc 1310949
G09	SBR1114531	ENSRNOT00000047053.6	Srebf1	ENSRNOG00000003463	sterol regulatory element binding transcription factor 1 Source RGD Symbol Acc 69423
G10	SBR1140424	ENSRNOT00000009240.6	Tg	ENSRNOG00000006104	thyroglobulin Source RGD Symbol Acc 3848
G11	SBR1129529	ENSRNOT00000004900.4	Ucp1	ENSRNOG00000003580	uncoupling protein 1 Source RGD Symbol Acc 3931
G12	SBR1108862	ENSRNOT00000044163.4	Vegfa	ENSRNOG00000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
H01	SBR1220567	ENSRNOT00000042459.4	Actb	ENSRNOG00000034254	actin, beta Source RGD Symbol Acc 628837
H02	SBR1220568	ENSRNOT00000023017.5	B2m	ENSRNOG00000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	SBR1225377	ENSRNOT00000065935.3	Hprt1	ENSRNOG00000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	SBR1122313	ENSRNOT00000017468.2	Ldha	ENSRNOG00000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	SBR1220572	ENSRNOT00000018820.5	Rplp1	ENSRNOG00000013874	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 µl reactions: 20 µl 8x gDNA Removal Mix, 10 µl Reverse Transcription Enzyme, 40 µl Reverse Transcription Mix (containing RT primers), 20 µl Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova SYBR Green RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova SYBR Green RT-PCR Master Mix, 20 µl QuantiNova SYBR Green RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208152
QuantiNova SYBR Green PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova SYBR Green PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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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