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

Rat Hedgehog Signaling Pathway

Cat. no. 249950 SBRN-078ZA

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** for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	Bcl2	Bmp2	Bmp4	Bmp5	Bmp6	Bmp7	Bmp8a	Boc	Btrc	Npc1	Cdon	Csnk1a1
B	Csnk1e	Csnk1g1	Ctnnb1	Dchs1	Dhh	Disp1	Disp2	Erbb4	Fbxw11	Fgf9	Fgfr3	Fkbp8
C	Foxe1	Gli1	Gli2	Gli3	Grem1	Gsk3b	Hhat	Hhip	Ift52	Igf2	Ihh	Kctd11
D	Lats1	Lats2	Lrp2	Mapk1	Mdm2	Mob1b	Mtss1	Nf2	Numb	LOC100911492	Pdgfra	Prkaca
E	Prkacb	Ptch1	Disp3	Rab23	Rassf4	Runx2	Sfrp1	Shh	Shox2	Smo	Stk3	Sufu
F	Tp53	Vegfa	Wif1	Wnt1	Wnt10a	Wnt10b	Wnt11	Wnt16	Wnt2	Wnt2b	Wnt3	Wnt3a
G	Wnt4	Wnt5a	Wnt5b	Wnt6	Wnt7a	Wnt7b	Wnt8a	Wnt8b	Wnt9a	Wnt9b	Zic1	Zic2
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	SBR1170984	ENSRNOT00000003768.2	Bcl2	ENSRNOG00000002791	BCL2, apoptosis regulator Source RGD Symbol Acc 2199
A02	SBR1127251	ENSRNOT00000028904.4	Bmp2	ENSRNOG00000021276	bone morphogenetic protein 2 Source RGD Symbol Acc 2211
A03	SBR1132271	ENSRNOT00000012957.6	Bmp4	ENSRNOG00000009694	bone morphogenetic protein 4 Source RGD Symbol Acc 2213
A04	SBR1175011	ENSRNOT00000014846.5	Bmp5	ENSRNOG00000010917	bone morphogenetic protein 5 Source RGD Symbol Acc 1305979
A05	SBR1213989	ENSRNOT00000018359.7	Bmp6	ENSRNOG00000013717	bone morphogenetic protein 6 Source RGD Symbol Acc 2214
A06	SBR1093977	ENSRNOT00000084990.1	Bmp7	ENSRNOG00000053384	bone morphogenetic protein 7 Source RGD Symbol Acc 620743
A07	SBR1111676	ENSRNOT00000045922.2	Bmp8a	ENSRNOG00000030155	bone morphogenetic protein 8a Source RGD Symbol Acc 1585858
A08	SBR1100089	ENSRNOT00000002790.7	Boc	ENSRNOG00000002041	BOC cell adhesion associated, oncogene regulated Source RGD Symbol Acc 1304550
A09	SBR1214609	ENSRNOT00000022426.7	Btrc	ENSRNOG00000016280	beta-transducin repeat containing E3 ubiquitin protein ligase Source RGD Symbol Acc 1359721
A10	SBR1196638	ENSRNOT00000016167.7	Npc1	ENSRNOG00000012016	NPC intracellular cholesterol transporter 1 Source RGD Symbol Acc 628693
A11	SBR1140227	ENSRNOT00000016248.4	Cdon	ENSRNOG00000011789	cell adhesion associated, oncogene regulated Source RGD Symbol Acc 708433
A12	SBR1179183	ENSRNOT00000066133.3	Csnk1a1	ENSRNOG00000017106	casein kinase 1, alpha 1 Source RGD Symbol Acc 71098
B01	SBR1144605	ENSRNOT00000018126.3	Csnk1e	ENSRNOG00000013076	casein kinase 1, epsilon Source RGD Symbol Acc 62045
B02	SBR1156579	ENSRNOT00000042369.3	Csnk1g1	ENSRNOG00000016620	casein kinase 1, gamma 1 Source RGD Symbol Acc 621404
B03	SBR1143136	ENSRNOT00000079085.1	Ctnnb1	ENSRNOG00000054172	catenin beta 1 Source RGD Symbol Acc 70487
B04	SBR1214675	ENSRNOT00000042865.5	Dchs1	ENSRNOG00000031643	dachsous cadherin-related 1 Source RGD Symbol Acc 1309878
B05	SBR1130399	ENSRNOT00000087327.1	Dhh	ENSRNOG00000053675	desert hedgehog signaling molecule Source RGD Symbol Acc 620711
B06	SBR1115482	ENSRNOT00000004834.4	Disp1	ENSRNOG00000003635	dispatched RND transporter family member 1 Source RGD Symbol Acc 1307675
B07	SBR1161525	ENSRNOT00000031231.5	Disp2	ENSRNOG00000026787	dispatched RND transporter family member 2 Source RGD Symbol Acc 1309569
B08	SBR1106704	ENSRNOT00000019283.6	Erbb4	ENSRNOG00000014248	erb-b2 receptor tyrosine kinase 4 Source RGD Symbol Acc 620486
B09	SBR1111930	ENSRNOT00000079698.1	Fbxw11	ENSRNOG00000004395	F-box and WD repeat domain containing 11 Source RGD Symbol Acc 1309121
B10	SBR1156754	ENSRNOT00000015367.5	Fgf9	ENSRNOG00000011471	fibroblast growth factor 9 Source RGD Symbol Acc 2610
B11	SBR1145608	ENSRNOT00000080695.1	Fgfr3	ENSRNOG00000016818	fibroblast growth factor receptor 3 Source RGD Symbol Acc 620714
B12	SBR1190984	ENSRNOT00000077756.1	Fkbp8	ENSRNOG00000058359	FKBP prolyl isomerase 8 Source RGD Symbol Acc 1308670
C01	SBR1107908	ENSRNOT00000012637.3	Foxe1	ENSRNOG00000023497	forkhead box E1 Source RGD Symbol Acc 621723
C02	SBR1126418	ENSRNOT00000009803.7	Gli1	ENSRNOG00000025120	GLI family zinc finger 1 Source RGD Symbol Acc 621673
C03	SBR1164971	ENSRNOT00000009963.6	Gli2	ENSRNOG00000007261	GLI family zinc finger 2 Source RGD Symbol Acc 1309270
C04	SBR1156607	ENSRNOT00000019396.7	Gli3	ENSRNOG00000014395	GLI family zinc finger 3 Source RGD Symbol Acc 620272
C05	SBR1204904	ENSRNOT00000037895.3	Grem1	ENSRNOG00000026053	gremlin 1, DAN family BMP antagonist Source RGD Symbol Acc 2359
C06	SBR1155736	ENSRNOT00000077612.1	Gsk3b	ENSRNOG00000002833	glycogen synthase kinase 3 beta Source RGD Symbol Acc 70982
C07	SBR1111853	ENSRNOT00000072729.3	Hhat	ENSRNOG00000003925	hedgehog acyltransferase Source RGD Symbol Acc 1311746
C08	SBR1138408	ENSRNOT00000024616.7	Hhip	ENSRNOG00000018268	Hedgehog-interacting protein Source RGD Symbol Acc 1564108
C09	SBR1104701	ENSRNOT00000078101.1	Ift52	ENSRNOG00000007692	intraflagellar transport 52 Source RGD Symbol Acc 1311004
C10	SBR1106101	ENSRNOT00000050760.3	Igf2	ENSRNOG00000020369	insulin-like growth factor 2 Source RGD Symbol Acc 2870
		ENSRNOT00000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	SBR1195762	024419.4	Ihh	000018059	Indian hedgehog signaling molecule Source RGD Symbol Acc 620021
C12	SBR1188762	ENSRNOT00000 020970.3	Kctd11	ENSRNOG00 000015669	potassium channel tetramerization domain containing 11 Source RGD Symbol Acc 1307125
D01	SBR1190873	ENSRNOT00000 020098.7	Lats1	ENSRNOG00 000014916	large tumor suppressor kinase 1 Source RGD Symbol Acc 1564085
D02	SBR1137502	ENSRNOT00000 087978.1	Lats2	ENSRNOG00 000056343	large tumor suppressor kinase 2 Source RGD Symbol Acc 1305906
D03	SBR1146665	ENSRNOT00000 082624.1	Lrp2	ENSRNOG00 000056184	LDL receptor related protein 2 Source RGD Symbol Acc 68407
D04	SBR1202944	ENSRNOT00000 002533.7	Mapk1	ENSRNOG00 000001849	mitogen activated protein kinase 1 Source RGD Symbol Acc 70500
D05	SBR1110929	ENSRNOT00000 066767.2	Mdm2	ENSRNOG00 000006304	MDM2 proto-oncogene Source RGD Symbol Acc 1305332
D06	SBR1191085	ENSRNOT00000 014650.5	Mob1b	ENSRNOG00 000010996	MOB kinase activator 1B Source RGD Symbol Acc 1305114
D07	SBR1170322	ENSRNOT00000 080155.1	Mtss1	ENSRNOG00 000009001	MTSS1, I-BAR domain containing Source RGD Symbol Acc 1309883
D08	SBR1106151	ENSRNOT00000 010690.5	Nf2	ENSRNOG00 000007948	neurofibromin 2 Source RGD Symbol Acc 3169
D09	SBR1158522	ENSRNOT00000 049481.5	Numb	ENSRNOG00 000009653	NUMB, endocytic adaptor protein Source RGD Symbol Acc 620107
D10	SBR1197323	ENSRNOT00000 074488.2	LOC10091 1492	ENSRNOG00 000048322	orthodenticle homeobox 2 Source RGD Symbol Acc 1305705
D11	SBR1195557	ENSRNOT00000 003077.5	Pdgfra	ENSRNOG00 000002244	platelet derived growth factor receptor alpha Source RGD Symbol Acc 3284
D12	SBR1139916	ENSRNOT00000 041717.4	Prkaca	ENSRNOG00 000005257	protein kinase cAMP-activated catalytic subunit alpha Source RGD Symbol Acc 3389
E01	SBR1138043	ENSRNOT00000 068739.1	Prkacb	ENSRNOG00 000004978	protein kinase cAMP-activated catalytic subunit beta Source RGD Symbol Acc 1310574
E02	SBR1146307	ENSRNOT00000 026287.5	Ptch1	ENSRNOG00 000019354	patched 1 Source RGD Symbol Acc 621425
E03	SBR1207305	ENSRNOT00000 036647.6	Disp3	ENSRNOG00 000026447	dispatched RND transporter family member 3 Source RGD Symbol Acc 1305820
E04	SBR1188842	ENSRNOT00000 016933.4	Rab23	ENSRNOG00 000012629	RAB23, member RAS oncogene family Source RGD Symbol Acc 1306867
E05	SBR1145979	ENSRNOT00000 018101.7	Rassf4	ENSRNOG00 000013526	Ras association domain family member 4 Source RGD Symbol Acc 1307785
E06	SBR1103643	ENSRNOT00000 061014.4	Runx2	ENSRNOG00 000020193	runt-related transcription factor 2 Source RGD Symbol Acc 2282
E07	SBR1098532	ENSRNOT00000 024128.6	Sfrp1	ENSRNOG00 000017783	secreted frizzled-related protein 1 Source RGD Symbol Acc 621074
E08	SBR1130647	ENSRNOT00000 008497.2	Shh	ENSRNOG00 000006120	sonic hedgehog signaling molecule Source RGD Symbol Acc 3673
E09	SBR1131116	ENSRNOT00000 016843.5	Shox2	ENSRNOG00 000012478	short stature homeobox 2 Source RGD Symbol Acc 3674
E10	SBR1198492	ENSRNOT00000 080223.1	Smo	ENSRNOG00 000008332	smoothened, frizzled class receptor Source RGD Symbol Acc 3726
E11	SBR1183874	ENSRNOT00000 065722.3	Stk3	ENSRNOG00 000011278	serine/threonine kinase 3 Source RGD Symbol Acc 68412
E12	SBR1164474	ENSRNOT00000 026987.5	Sufu	ENSRNOG00 000019807	SUFU negative regulator of hedgehog signaling Source RGD Symbol Acc 1559462
F01	SBR1172374	ENSRNOT00000 046490.3	Tp53	ENSRNOG00 000010756	tumor protein p53 Source RGD Symbol Acc 3889
F02	SBR1108862	ENSRNOT00000 044163.4	Vegfa	ENSRNOG00 000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
F03	SBR1167957	ENSRNOT00000 006426.5	Wif1	ENSRNOG00 000004476	Wnt inhibitory factor 1 Source RGD Symbol Acc 619774
F04	SBR1167539	ENSRNOT00000 090156.1	Wnt1	ENSRNOG00 000061818	Wnt family member 1 Source RGD Symbol Acc 1597195
F05	SBR1155010	ENSRNOT00000 086375.1	Wnt10a	ENSRNOG00 000052510	Wnt family member 10A Source RGD Symbol Acc 1307015
F06	SBR1106181	ENSRNOT00000 081468.1	Wnt10b	ENSRNOG00 000061238	Wnt family member 10B Source RGD Symbol Acc 1304988
F07	SBR1196784	ENSRNOT00000 021674.5	Wnt11	ENSRNOG00 000015982	Wnt family member 11 Source RGD Symbol Acc 621463
F08	SBR1189477	ENSRNOT00000 007822.4	Wnt16	ENSRNOG00 000005781	Wnt family member 16 Source RGD Symbol Acc 1562253
F09	SBR1114751	ENSRNOT00000 083039.1	Wnt2	ENSRNOG00 000051905	Wnt family member 2 Source RGD Symbol Acc 621346
F10	SBR1180983	ENSRNOT00000 019349.4	Wnt2b	ENSRNOG00 000014385	Wnt family member 2B Source RGD Symbol Acc 69346

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	SBR1107006	ENSRNOT00000005176.5	Wnt3	ENSRNOG00000003845	Wnt family member 3 Source RGD Symbol Acc 3972
F12	SBR1178408	ENSRNOT00000064505.3	Wnt3a	ENSRNOG00000003039	Wnt family member 3A Source RGD Symbol Acc 1308057
G01	SBR1203603	ENSRNOT00000018064.5	Wnt4	ENSRNOG00000013166	Wnt family member 4 Source RGD Symbol Acc 621348
G02	SBR1212833	ENSRNOT00000021164.3	Wnt5a	ENSRNOG00000015618	Wnt family member 5A Source RGD Symbol Acc 69250
G03	SBR1206664	ENSRNOT00000011044.4	Wnt5b	ENSRNOG00000008168	Wnt family member 5B Source RGD Symbol Acc 628850
G04	SBR1200772	ENSRNOT00000023439.6	Wnt6	ENSRNOG00000017409	Wnt family member 6 Source RGD Symbol Acc 1304559
G05	SBR1102081	ENSRNOT00000070832.1	Wnt7a	ENSRNOG00000048782	Wnt family member 7A Source RGD Symbol Acc 69079
G06	SBR1173541	ENSRNOT00000021196.7	Wnt7b	ENSRNOG00000015750	Wnt family member 7B Source RGD Symbol Acc 1311441
G07	SBR1095437	ENSRNOT00000064574.1	Wnt8a	ENSRNOG00000020157	Wnt family member 8A Source RGD Symbol Acc 1306312
G08	SBR1182384	ENSRNOT00000018815.6	Wnt8b	ENSRNOG00000013817	Wnt family member 8B Source RGD Symbol Acc 1307644
G09	SBR1108175	ENSRNOT00000058327.3	Wnt9a	ENSRNOG00000003066	Wnt family member 9A Source RGD Symbol Acc 1305018
G10	SBR1145553	ENSRNOT00000005074.5	Wnt9b	ENSRNOG00000003807	Wnt family member 9B Source RGD Symbol Acc 1309574
G11	SBR1101345	ENSRNOT00000019860.5	Zic1	ENSRNOG00000014644	Zic family member 1 Source RGD Symbol Acc 620110
G12	SBR1113317	ENSRNOT00000089455.1	Zic2	ENSRNOG00000054879	Zic family member 2 Source RGD Symbol Acc 1311174
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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