

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

## Rat Insulin Signaling Pathway

Cat. no. 249955 UPRN-030ZA

For study focus gene expression analysis

### Shipping and storage

QuantiNova LNA Probe PCR Focus Panels are shipped at room temperature. Immediately upon receipt, they should be stored protected from light 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 Probe PCR Focus Panels should be used together with the QuantiNova Reverse Transcription Kit for cDNA synthesis and the QuantiNova Probe PCR Kit (Mastermix) for PCR.

### Panel layout (96-well): QuantiNova LNA Probe PCR Focus Panel

For the 384-well (4 × 96) PCR panels, genes are present in a staggered format. Refer to the QuantiNova LNA Probe PCR 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>	Acaca	Acox1	Adra1d	Aebp1	Akt1	Akt2	Akt3	Araf	Bcl2l1	Braf	Cap1	Cbl
<b>B</b>	Cebpa	Cebpb	Cfd	Dok1	Dok2	Dok3	Dusp14	Eif2b1	Eif4ebp1	Erc1	Fasn	Fbp1
<b>C</b>	Fos	Frs2	Frs3	G6pc	Gab1	Gcg	Gck	Gpd1	Grb10	Grb2	Gsk3b	Hk2
<b>D</b>	Hras	Igf1r	Igf2	Igfbp1	Ins1	Ins2	Ins3	Insr	Irs1	Irs2	Jun	KIF10
<b>E</b>	Kras	Ldlr	Lep	Map2k1	Mapk1	Mtor	Nos2	LOC1009122 28	Pck2	Pdpk1	Pik3ca	Pik3cb
<b>F</b>	Pik3r1	Pik3r2	Pikr	Pparg	Ppp1ca	Prkcg	Prkcz	Prk	Ptpn1	Raf1	Retn	Rps6ka1
<b>G</b>	Rras	Rras2	Serpine1	Shc1	Slc27a4	Slc2a1	Slc2a4	Sos1	Srebf1	Tg	Ucp1	Vegfa
<b>H</b>	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFR1068311	ENSRNOT00000088138.1	Acaca	ENSRNOG0000034013	acetyl-CoA carboxylase alpha Source RGD Symbol Acc 621248
A02	UPFR1092066	ENSRNOT00000046754.5	Acox1	ENSRNOG0000008755	acyl-CoA oxidase 1 Source RGD Symbol Acc 619757
A03	UPFR1071837	ENSRNOT00000028877.2	Adra1d	ENSRNOG0000021256	adrenoceptor alpha 1D Source RGD Symbol Acc 62064
A04	UPFR1051635	ENSRNOT00000018846.6	Aebp1	ENSRNOG0000013720	AE binding protein 1 Source RGD Symbol Acc 1306922
A05	UPFR1083196	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A06	UPFR1088137	ENSRNOT00000025303.3	Akt2	ENSRNOG0000018677	AKT serine/threonine kinase 2 Source RGD Symbol Acc 2082
A07	UPFR1105050	ENSRNOT00000085648.1	Akt3	ENSRNOG0000021497	AKT serine/threonine kinase 3 Source RGD Symbol Acc 62390
A08	UPFR1060431	ENSRNOT00000039911.3	Araf	ENSRNOG0000010838	A-Raf proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 2148
A09	UPFR1047186	ENSRNOT00000010762.7	Bcl2l1	ENSRNOG0000007946	Bcl2-like 1 Source RGD Symbol Acc 2200
A10	UPFR1075695	ENSRNOT00000014604.7	Braf	ENSRNOG0000010957	B-Raf proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 619908
A11	UPFR1029404	ENSRNOT00000018711.4	Cap1	ENSRNOG0000013492	cyclase associated actin cytoskeleton regulatory protein 1 Source RGD Symbol Acc 620309
A12	UPFR1075129	ENSRNOT00000067902.3	Cbl	ENSRNOG0000008444	Cbl proto-oncogene Source RGD Symbol Acc 1561386
B01	UPFR1048419	ENSRNOT00000014517.5	Cebpa	ENSRNOG0000010918	CCAAT/enhancer binding protein alpha Source RGD Symbol Acc 2326
B02	UPFR1126579	ENSRNOT00000083876.1	Cebpb	ENSRNOG0000057347	CCAAT/enhancer binding protein beta Source RGD Symbol Acc 2327
B03	UPFR1118599	ENSRNOT00000015029.4	Cfd	ENSRNOG0000033564	complement factor D Source RGD Symbol Acc 2498
B04	UPFR1034355	ENSRNOT00000010020.4	Dok1	ENSRNOG0000007412	docking protein 1 Source RGD Symbol Acc 1309499
B05	UPFR1044310	ENSRNOT00000018725.6	Dok2	ENSRNOG0000013922	docking protein 2 Source RGD Symbol Acc 1310966
B06	UPFR1048169	ENSRNOT00000018232.4	Dok3	ENSRNOG0000013564	docking protein 3 Source RGD Symbol Acc 1311840
B07	UPFR1023493	ENSRNOT00000043148.6	Dusp14	ENSRNOG0000030091	dual specificity phosphatase 14 Source RGD Symbol Acc 1307415
B08	UPFR1062902	ENSRNOT00000077380.1	Eif2b1	ENSRNOG0000001039	eukaryotic translation initiation factor 2B subunit alpha Source RGD Symbol Acc 620819
B09	UPFR1083445	ENSRNOT00000016885.5	Eif4ebp1	ENSRNOG0000012582	eukaryotic translation initiation factor 4E binding protein 1 Source RGD Symbol Acc 620259
B10	UPFR1053097	ENSRNOT00000024113.5	Erc1	ENSRNOG0000017839	ERCC excision repair 1, endonuclease non-catalytic subunit Source RGD Symbol Acc 1306992
B11	UPFR1036900	ENSRNOT00000073321.2	Fasn	ENSRNOG0000045636	fatty acid synthase Source RGD Symbol Acc 620665
B12	UPFR1059543	ENSRNOT00000023685.6	Fbp1	ENSRNOG0000017597	fructose-bisphosphatase 1 Source RGD Symbol Acc 2595
C01	UPFR1045359	ENSRNOT00000010712.3	Fos	ENSRNOG0000008015	Fos proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2626
C02	UPFR1105722	ENSRNOT00000007472.6	Frs2	ENSRNOG0000005642	fibroblast growth factor receptor substrate 2 Source RGD Symbol Acc 1308201
C03	UPFR1066394	ENSRNOT00000019404.4	Frs3	ENSRNOG0000014328	fibroblast growth factor receptor substrate 3 Source RGD Symbol Acc 1310226
C04	UPFR1020583	ENSRNOT00000085831.1	G6pc	ENSRNOG0000051171	glucose-6-phosphatase, catalytic subunit Source RGD Symbol Acc 2644
C05	UPFR1032475	ENSRNOT00000083219.1	Gab1	ENSRNOG0000017879	GRB2-associated binding protein 1 Source RGD Symbol Acc 1311085
C06	UPFR1017810	ENSRNOT00000007356.4	Gcg	ENSRNOG0000005498	glucagon Source RGD Symbol Acc 2668
C07	UPFR1055169	ENSRNOT00000080147.1	Gck	ENSRNOG0000061527	glucokinase Source RGD Symbol Acc 2670
C08	UPFR1095776	ENSRNOT00000087662.1	Gpd1	ENSRNOG0000056457	glycerol-3-phosphate dehydrogenase 1 Source RGD Symbol Acc 621381
C09	UPFR1029982	ENSRNOT00000044726.4	Grb10	ENSRNOG0000004290	growth factor receptor bound protein 10 Source RGD Symbol Acc 1566234
C10	UPFR1087543	ENSRNOT00000005347.5	Grb2	ENSRNOG0000003990	growth factor receptor bound protein 2 Source RGD Symbol Acc 619758
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1109626	077612.1	Gsk3b	000002833	glycogen synthase kinase 3 beta Source RGD Symbol Acc 70982
C12	UPFR1093740	ENSRNOT0000008813.3	Hk2	ENSRNOG0000006116	hexokinase 2 Source RGD Symbol Acc 2797
D01	UPFR1076419	ENSRNOT00000022363.6	Hras	ENSRNOG0000016611	HRas proto-oncogene, GTPase Source RGD Symbol Acc 2827
D02	UPFR1018620	ENSRNOT00000019267.6	Igf1r	ENSRNOG0000014187	insulin-like growth factor 1 receptor Source RGD Symbol Acc 2869
D03	UPFR1085899	ENSRNOT00000089171.1	Igf2	ENSRNOG0000020369	insulin-like growth factor 2 Source RGD Symbol Acc 2870
D04	UPFR1053345	ENSRNOT00000077177.1	Igfbp1	ENSRNOG0000058780	insulin-like growth factor binding protein 1 Source RGD Symbol Acc 2872
D05	UPFR1070033	ENSRNOT00000016052.5	Ins1	ENSRNOG0000012052	insulin 1 Source RGD Symbol Acc 2915
D06	UPFR1114751	ENSRNOT00000027656.3	Ins2	ENSRNOG0000020405	insulin 2 Source RGD Symbol Acc 2916
D07	UPFR1095187	ENSRNOT00000025347.4	Ins13	ENSRNOG0000018757	insulin-like 3 Source RGD Symbol Acc 620117
D08	UPFR1014864	ENSRNOT00000041155.3	Insr	ENSRNOG0000029986	insulin receptor Source RGD Symbol Acc 2917
D09	UPFR1099858	ENSRNOT00000019579.5	Irs1	ENSRNOG0000014597	insulin receptor substrate 1 Source RGD Symbol Acc 2922
D10	UPFR1089782	ENSRNOT00000032918.6	Irs2	ENSRNOG0000023509	insulin receptor substrate 2 Source RGD Symbol Acc 69316
D11	UPFR1037970	ENSRNOT00000011731.3	Jun	ENSRNOG0000026293	Jun proto-oncogene, AP-1 transcription factor subunit Source RGD Symbol Acc 2943
D12	UPFR1058184	ENSRNOT00000008350.3	Klf10	ENSRNOG0000006118	Kruppel-like factor 10 Source RGD Symbol Acc 621652
E01	UPFR1088461	ENSRNOT00000012588.4	Kras	ENSRNOG0000009338	KRAS proto-oncogene, GTPase Source RGD Symbol Acc 2981
E02	UPFR1015414	ENSRNOT00000013496.3	Ldlr	ENSRNOG0000009946	low density lipoprotein receptor Source RGD Symbol Acc 2998
E03	UPFR1089630	ENSRNOT00000071926.1	Lep	ENSRNOG0000045797	leptin Source RGD Symbol Acc 3000
E04	UPFR1053192	ENSRNOT00000013933.6	Map2k1	ENSRNOG0000010176	mitogen activated protein kinase kinase 1 Source RGD Symbol Acc 70495
E05	UPFR1055882	ENSRNOT00000002533.7	Mapk1	ENSRNOG0000001849	mitogen activated protein kinase 1 Source RGD Symbol Acc 70500
E06	UPFR1112219	ENSRNOT00000080751.1	Mtor	ENSRNOG0000009615	mechanistic target of rapamycin kinase Source RGD Symbol Acc 68371
E07	UPFR1092405	ENSRNOT00000016133.6	Nos2	ENSRNOG0000057443	similar to Nitric oxide synthase, inducible (NOS type II) (Inducible NO synthase) (Inducible NOS) (iNOS) Source RGD Symbol Acc 1598227
E08	UPFR1048595	ENSRNOT00000013145.6	LOC100912228	ENSRNOG0000009768	neuropeptide Y Source RGD Symbol Acc 3197
E09	UPFR1076561	ENSRNOT00000025260.7	Pck2	ENSRNOG0000018536	phosphoenolpyruvate carboxykinase 2 (mitochondrial) Source MGI Symbol Acc MGI 1860456
E10	UPFR1093188	ENSRNOT00000067660.1	Pdpk1	ENSRNOG0000006136	3-phosphoinositide dependent protein kinase-1 Source RGD Symbol Acc 620307
E11	UPFR1035210	ENSRNOT00000083720.1	Pik3ca	ENSRNOG0000056371	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha Source RGD Symbol Acc 620916
E12	UPFR1105369	ENSRNOT00000022179.4	Pik3cb	ENSRNOG0000016384	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit beta Source RGD Symbol Acc 620917
F01	UPFR1035231	ENSRNOT00000075057.1	Pik3r1	ENSRNOG0000018903	phosphoinositide-3-kinase regulatory subunit 1 Source RGD Symbol Acc 3329
F02	UPFR1126563	ENSRNOT00000026210.5	Pik3r2	ENSRNOG0000019228	phosphoinositide-3-kinase regulatory subunit 2 Source RGD Symbol Acc 68341
F03	UPFR1065120	ENSRNOT00000065791.2	Pklr	ENSRNOG0000020420	pyruvate kinase L/R Source RGD Symbol Acc 3336
F04	UPFR1091351	ENSRNOT00000051858.5	Pparg	ENSRNOG0000008839	peroxisome proliferator-activated receptor gamma Source RGD Symbol Acc 3371
F05	UPFR1024682	ENSRNOT00000091680.1	Ppp1ca	ENSRNOG0000018708	protein phosphatase 1 catalytic subunit alpha Source RGD Symbol Acc 3375
F06	UPFR1032334	ENSRNOT00000080032.1	Prkcg	ENSRNOG0000054371	protein kinase C, gamma Source RGD Symbol Acc 3397
F07	UPFR1112897	ENSRNOT00000021285.6	Prkcz	ENSRNOG0000015480	protein kinase C, zeta Source RGD Symbol Acc 3399
F08	UPFR1015066	ENSRNOT00000023412.4	Prl	ENSRNOG0000017374	prolactin Source RGD Symbol Acc 3403
F09	UPFR1035305	ENSRNOT00000014309.4	Ptpn1	ENSRNOG0000010574	protein tyrosine phosphatase, non-receptor type 1 Source RGD Symbol Acc 61965
F10	UPFR1087799	ENSRNOT00000013831.6	Raf1	ENSRNOG0000010153	Raf-1 proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 3531

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1112127	ENSRNOT00000091197.1	Retn	ENSRNOG0000001001	resistin Source RGD Symbol Acc 628781
F12	UPFR1100992	ENSRNOT00000068634.3	Rps6ka1	ENSRNOG0000042411	ribosomal protein S6 kinase A1 Source RGD Symbol Acc 620675
G01	UPFR1024079	ENSRNOT00000027809.7	Rras	ENSRNOG0000037247	RAS related Source RGD Symbol Acc 1311443
G02	UPFR1038025	ENSRNOT00000017199.5	Rras2	ENSRNOG0000012258	RAS related 2 Source RGD Symbol Acc 1310793
G03	UPFR1051798	ENSRNOT00000001916.2	Serpine1	ENSRNOG0000001414	serpin family E member 1 Source RGD Symbol Acc 3249
G04	UPFR1103707	ENSRNOT00000028038.6	Shc1	ENSRNOG0000020657	SHC adaptor protein 1 Source RGD Symbol Acc 620446
G05	UPFR1026149	ENSRNOT00000019500.6	Slc27a4	ENSRNOG0000014369	solute carrier family 27 member 4 Source RGD Symbol Acc 1307383
G06	UPFR1052096	ENSRNOT00000083700.1	Slc2a1	ENSRNOG0000007284	solute carrier family 2 member 1 Source RGD Symbol Acc 3704
G07	UPFR1026140	ENSRNOT00000023256.5	Slc2a4	ENSRNOG0000017226	solute carrier family 2 member 4 Source RGD Symbol Acc 2711
G08	UPFR1051335	ENSRNOT00000009359.7	Sos1	ENSRNOG0000007106	SOS Ras/Rac guanine nucleotide exchange factor 1 Source RGD Symbol Acc 1310949
G09	UPFR1104408	ENSRNOT00000004753.5	Srebf1	ENSRNOG0000003463	sterol regulatory element binding transcription factor 1 Source RGD Symbol Acc 69423
G10	UPFR1033016	ENSRNOT00000093298.1	Tg	ENSRNOG0000006104	thyroglobulin Source RGD Symbol Acc 3848
G11	UPFR1121701	ENSRNOT00000004900.4	Ucp1	ENSRNOG0000003580	uncoupling protein 1 Source RGD Symbol Acc 3931
G12	UPFR1117908	ENSRNOT00000026559.5	Vegfa	ENSRNOG0000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
H01	UPFR1132952	ENSRNOT00000080216.1	Actb	ENSRNOG0000034254	actin, beta Source RGD Symbol Acc 628837
H02	UPFR1132953	ENSRNOT00000023017.5	B2m	ENSRNOG0000017123	beta-2 microglobulin Source RGD Symbol Acc 2189
H03	UPFR1132959	ENSRNOT00000065935.3	Hprt1	ENSRNOG0000048561	hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826
H04	UPFR1018740	ENSRNOT00000017468.2	Ldha	ENSRNOG0000013009	lactate dehydrogenase A Source RGD Symbol Acc 2996
H05	UPFR1132958	ENSRNOT00000018820.5	Rplp1	ENSRNOG0000013874	ribosomal protein lateral stalk subunit P1 Source RGD Symbol Acc 621774
H06	UPFR1126610	UPL_RGDC	RGDC	UPL_RGDC	Rat Genomic DNA Contamination
H07	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H08	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H09	UPFH1126606	UPL_QIC	QIC	UPL_QIC	QuantiNova Internal Control
H10	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H11	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control
H12	UPFH1126605	UPL_PPC	PPC	UPL_PPC	Positive PCR Control



## Related products

Product	Contents	Cat. no.
QuantiNova LNA Probe PCR QC Panel	These panels are designed to assess the quality of RNA samples before characterization using QuantiNova LNA Probe PCR Focus Panels; available in 96-well, 384-well, and Rotor-Disc 100 formats	249945
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 Probe RT-PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 $\mu$ l QuantiNova Probe 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	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 $\mu$ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 $\mu$ l QuantiNova Yellow Template Dilution Buffer, 250 $\mu$ l QN ROX Reference Dye, 1.9 ml Water	208252

\*Larger kit sizes available.

The QuantiNova LNA Probe 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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