

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

## Rat VEGF Signaling

Cat. no. 249955 UPRN-091ZA

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
A	Akt1	Akt2	Akt3	Arnt	Bad	Casp9	Cav1	Cdc42	Vegfd	Fit1	Fit4	Grb2
B	Hif1a	Hras	Hsp90aa1	Hspb1	Kdr	Kras	Map2k1	Map2k2	Mapk1	Mapk11	Mapk12	Mapk13
C	Mapk14	Mapk3	Mapkapk2	Mapkapk3	Nfat5	Nfatc2	Nfatc3	Nfatc4	Nos3	Nras	Nrp1	Nrp2
D	Pdgfc	Pgf	Pik3ca	Pik3cb	Pik3cd	Pik3cg	Pik3r1	Pik3r2	Pik3r3	Pik3r5	Pla2g10	Pla2g12a
E	Pla2g12b	Pla2g1b	Pla2g2a	Pla2g2d	Pla2g2e	Pla2g2f	Pla2g3	Pla2g4a	Pla2g4b	Pla2g5	Pla2g6	Plcg1
F	Plcg2	Ppp3ca	Ppp3cb	Ppp3cc	Ppp3r1	Ppp3r2	Prkca	Prkcb	Prkcg	Ptgs2	Pik2	Pxn
G	Rac1	Rac2	Raf1	Nfatc1	Sh2d2a	Shc2	Sphk1	Sphk2	Src	Vegfa	Vegfb	Vegfc
H	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	UPFR1083196	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A02	UPFR1088137	ENSRNOT00000025303.3	Akt2	ENSRNOG0000018677	AKT serine/threonine kinase 2 Source RGD Symbol Acc 2082
A03	UPFR1105050	ENSRNOT00000085648.1	Akt3	ENSRNOG0000021497	AKT serine/threonine kinase 3 Source RGD Symbol Acc 62390
A04	UPFR1041304	ENSRNOT00000044738.4	Arnt	ENSRNOG0000031174	aryl hydrocarbon receptor nuclear translocator Source RGD Symbol Acc 2153
A05	UPFR1109796	ENSRNOT00000028712.5	Bad	ENSRNOG0000021147	BCL2-associated agonist of cell death Source RGD Symbol Acc 620103
A06	UPFR1054782	ENSRNOT00000085378.1	Casp9	ENSRNOG0000012944	caspase 9 Source RGD Symbol Acc 61867
A07	UPFR1012931	ENSRNOT00000078250.1	Cav1	ENSRNOG0000056836	caveolin 1 Source RGD Symbol Acc 2280
A08	UPFR1103160	ENSRNOT00000018118.5	Cdc42	ENSRNOG0000013536	cell division cycle 42 Source RGD Symbol Acc 71043
A09	UPFR1115126	ENSRNOT00000068601.2	Vegfd	ENSRNOG0000003587	vascular endothelial growth factor D Source RGD Symbol Acc 620695
A10	UPFR1070633	ENSRNOT00000001248.3	Fit1	ENSRNOG0000000940	FMS-related tyrosine kinase 1 Source RGD Symbol Acc 2621
A11	UPFR1103317	ENSRNOT00000003519.5	Fit4	ENSRNOG0000002511	fms-related tyrosine kinase 4 Source RGD Symbol Acc 621737
A12	UPFR1087543	ENSRNOT00000005347.5	Grb2	ENSRNOG0000003990	growth factor receptor bound protein 2 Source RGD Symbol Acc 619758
B01	UPFR1061095	ENSRNOT00000049725.3	Hif1a	ENSRNOG0000008292	hypoxia inducible factor 1 subunit alpha Source RGD Symbol Acc 61928
B02	UPFR1076419	ENSRNOT00000022363.6	Hras	ENSRNOG0000016611	HRas proto-oncogene, GTPase Source RGD Symbol Acc 2827
B03	UPFR1014170	ENSRNOT00000086310.1	Hsp90aa1	ENSRNOG0000059714	heat shock protein 90 alpha family class A member 1 Source RGD Symbol Acc 631409
B04	UPFR1030516	ENSRNOT00000031555.5	Hspb1	ENSRNOG0000023546	heat shock protein family B (small) member 1 Source RGD Symbol Acc 61306
B05	UPFR1041145	ENSRNOT00000085089.1	Kdr	ENSRNOG0000046829	kinase insert domain receptor Source RGD Symbol Acc 2965
B06	UPFR1088461	ENSRNOT00000012588.4	Kras	ENSRNOG0000009338	KRAS proto-oncogene, GTPase Source RGD Symbol Acc 2981
B07	UPFR1053192	ENSRNOT00000013933.6	Map2k1	ENSRNOG0000010176	mitogen activated protein kinase kinase 1 Source RGD Symbol Acc 70495
B08	UPFR1041466	ENSRNOT00000027272.5	Map2k2	ENSRNOG0000020005	mitogen activated protein kinase kinase 2 Source RGD Symbol Acc 61888
B09	UPFR1055882	ENSRNOT00000002533.7	Mapk1	ENSRNOG0000001849	mitogen activated protein kinase 1 Source RGD Symbol Acc 70500
B10	UPFR1074404	ENSRNOT00000009325.6	Mapk11	ENSRNOG0000006984	mitogen-activated protein kinase 11 Source RGD Symbol Acc 1309340
B11	UPFR1079036	ENSRNOT00000044376.4	Mapk12	ENSRNOG0000031233	mitogen-activated protein kinase 12 Source RGD Symbol Acc 70975
B12	UPFR1029556	ENSRNOT00000000621.6	Mapk13	ENSRNOG0000000515	mitogen activated protein kinase 13 Source RGD Symbol Acc 3045
C01	UPFR1036984	ENSRNOT00000000617.8	Mapk14	ENSRNOG0000000513	mitogen activated protein kinase 14 Source RGD Symbol Acc 70496
C02	UPFR1049954	ENSRNOT00000087625.1	Mapk3	ENSRNOG0000053583	mitogen activated protein kinase 3 Source RGD Symbol Acc 3046
C03	UPFR1112750	ENSRNOT00000061070.4	Mapkapk2	ENSRNOG0000004726	mitogen-activated protein kinase-activated protein kinase 2 Source RGD Symbol Acc 631362
C04	UPFR1060799	ENSRNOT00000020065.5	Mapkapk3	ENSRNOG0000014832	mitogen-activated protein kinase-activated protein kinase 3 Source RGD Symbol Acc 1304980
C05	UPFR1019376	ENSRNOT00000017005.5	Nfat5	ENSRNOG0000011879	nuclear factor of activated T-cells 5 Source RGD Symbol Acc 1309142
C06	UPFR1082530	ENSRNOT00000065615.1	Nfatc2	ENSRNOG0000012175	nuclear factor of activated T-cells 2 Source RGD Symbol Acc 1307690
C07	UPFR1047494	ENSRNOT00000087491.1	Nfatc3	ENSRNOG0000054264	nuclear factor of activated T-cells 3 Source RGD Symbol Acc 1308692
C08	UPFR1030738	ENSRNOT00000027789.5	Nfatc4	ENSRNOG0000020482	nuclear factor of activated T-cells 4 Source RGD Symbol Acc 1310749
C09	UPFR1032783	ENSRNOT00000013058.4	Nos3	ENSRNOG0000009348	nitric oxide synthase 3 Source RGD Symbol Acc 3186
C10	UPFR1038224	ENSRNOT00000039572.3	Nras	ENSRNOG0000023079	NRAS proto-oncogene, GTPase Source RGD Symbol Acc 3205
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1025300	080465.1	Nrp1	000010744	neuropilin 1 Source RGD Symbol Acc 621588
C12	UPFR1067456	ENSRNOT00000 042562.3	Nrp2	ENSRNOG00 000031232	neuropilin 2 Source RGD Symbol Acc 621442
D01	UPFR1031722	ENSRNOT00000 015081.4	Pdgfc	ENSRNOG00 000010695	platelet derived growth factor C Source RGD Symbol Acc 68410
D02	UPFR1118244	ENSRNOT00000 007790.5	Pgf	ENSRNOG00 000005650	placental growth factor Source RGD Symbol Acc 619850
D03	UPFR1035210	ENSRNOT00000 083720.1	Pik3ca	ENSRNOG00 000056371	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha Source RGD Symbol Acc 620916
D04	UPFR1105369	ENSRNOT00000 022179.4	Pik3cb	ENSRNOG00 000016384	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit beta Source RGD Symbol Acc 620917
D05	UPFR1091879	ENSRNOT00000 066179.2	Pik3cd	ENSRNOG00 000016846	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit delta Source RGD Symbol Acc 1310990
D06	UPFR1091290	ENSRNOT00000 012487.5	Pik3cg	ENSRNOG00 000009385	phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit gamma Source RGD Symbol Acc 1306468
D07	UPFR1035231	ENSRNOT00000 075057.1	Pik3r1	ENSRNOG00 000018903	phosphoinositide-3-kinase regulatory subunit 1 Source RGD Symbol Acc 3329
D08	UPFR1126563	ENSRNOT00000 026210.5	Pik3r2	ENSRNOG00 000019228	phosphoinositide-3-kinase regulatory subunit 2 Source RGD Symbol Acc 68341
D09	UPFR1082681	ENSRNOT00000 000157.3	Pik3r3	ENSRNOG00 000000145	phosphoinositide-3-kinase regulatory subunit 3 Source RGD Symbol Acc 621042
D10	UPFR1048935	ENSRNOT00000 032785.5	Pik3r5	ENSRNOG00 000023428	phosphoinositide-3-kinase, regulatory subunit 5 Source RGD Symbol Acc 1563261
D11	UPFR1073069	ENSRNOT00000 004237.2	Pla2g10	ENSRNOG00 000003164	phospholipase A2, group X Source RGD Symbol Acc 61935
D12	UPFR1016426	ENSRNOT00000 080183.1	Pla2g12a	ENSRNOG00 000057470	phospholipase A2, group XIA Source RGD Symbol Acc 1304662
E01	UPFR1018139	ENSRNOT00000 074524.2	Pla2g12b	ENSRNOG00 000046619	phospholipase A2, group XIIB Source RGD Symbol Acc 1588484
E02	UPFR1117063	ENSRNOT00000 001525.3	Pla2g1b	ENSRNOG00 000001153	phospholipase A2 group IB Source RGD Symbol Acc 61949
E03	UPFR1021409	ENSRNOT00000 022827.4	Pla2g2a	ENSRNOG00 000016945	phospholipase A2 group IIA Source RGD Symbol Acc 620857
E04	UPFR1047545	ENSRNOT00000 022579.5	Pla2g2d	ENSRNOG00 000016826	phospholipase A2, group IID Source RGD Symbol Acc 1309862
E05	UPFR1041583	ENSRNOT00000 022847.5	Pla2g2e	ENSRNOG00 000017024	phospholipase A2, group IIE Source RGD Symbol Acc 1309611
E06	UPFR1090932	ENSRNOT00000 022559.5	Pla2g2f	ENSRNOG00 000016798	phospholipase A2, group IIF Source RGD Symbol Acc 1597305
E07	UPFR1075394	ENSRNOT00000 029848.3	Pla2g3	ENSRNOG00 000025121	phospholipase A2, group III Source RGD Symbol Acc 1305323
E08	UPFR1116754	ENSRNOT00000 090693.1	Pla2g4a	ENSRNOG00 000002657	phospholipase A2 group IVA Source RGD Symbol Acc 67366
E09	UPFR1119990	ENSRNOT00000 066685.2	Pla2g4b	ENSRNOG00 000007447	phospholipase A2 group IVB Source RGD Symbol Acc 1308658
E10	UPFR1033443	ENSRNOT00000 022716.5	Pla2g5	ENSRNOG00 000016838	phospholipase A2, group V Source RGD Symbol Acc 62051
E11	UPFR1077139	ENSRNOT00000 090565.1	Pla2g6	ENSRNOG00 000012295	phospholipase A2 group VI Source RGD Symbol Acc 628867
E12	UPFR1035470	ENSRNOT00000 078909.1	Plcg1	ENSRNOG00 000051490	phospholipase C, gamma 1 Source RGD Symbol Acc 3347
F01	UPFR1066410	ENSRNOT00000 090165.1	Plcg2	ENSRNOG00 000051986	phospholipase C, gamma 2 Source RGD Symbol Acc 3348
F02	UPFR1110596	ENSRNOT00000 047975.5	Ppp3ca	ENSRNOG00 000009882	protein phosphatase 3 catalytic subunit alpha Source RGD Symbol Acc 3382
F03	UPFR1044647	ENSRNOT00000 082236.1	Ppp3cb	ENSRNOG00 000054782	protein phosphatase 3 catalytic subunit beta Source RGD Symbol Acc 3383
F04	UPFR1112347	ENSRNOT00000 082505.1	Ppp3cc	ENSRNOG00 000009745	protein phosphatase 3 catalytic subunit gamma Source RGD Symbol Acc 621616
F05	UPFR1044255	ENSRNOT00000 031275.6	Ppp3r1	ENSRNOG00 000043210	protein phosphatase 3, regulatory subunit B, alpha Source RGD Symbol Acc 69230
F06	UPFR1121613	ENSRNOT00000 007290.2	Ppp3r2	ENSRNOG00 000005368	protein phosphatase 3, regulatory subunit B, beta Source RGD Symbol Acc 69232
F07	UPFR1034906	ENSRNOT00000 004699.8	Prkca	ENSRNOG00 000003491	protein kinase C, alpha Source RGD Symbol Acc 3395
F08	UPFR1083743	ENSRNOT00000 016418.6	Prkcb	ENSRNOG00 000012061	protein kinase C, beta Source RGD Symbol Acc 3396
F09	UPFR1032334	ENSRNOT00000 080032.1	Prkcg	ENSRNOG00 000054371	protein kinase C, gamma Source RGD Symbol Acc 3397
F10	UPFR1035449	ENSRNOT00000 003567.4	Ptgs2	ENSRNOG00 000002525	prostaglandin-endoperoxide synthase 2 Source RGD Symbol Acc 620349

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1115915	ENSRNOT00000011219.6	Ptk2	ENSRNOG0000007916	protein tyrosine kinase 2 Source RGD Symbol Acc 3443
F12	UPFR1053103	ENSRNOT00000081134.1	Pxn	ENSRNOG0000001149	paxillin Source RGD Symbol Acc 1305759
G01	UPFR1019271	ENSRNOT00000001417.5	Rac1	ENSRNOG0000001068	Rac family small GTPase 1 Source RGD Symbol Acc 619755
G02	UPFR1037602	ENSRNOT00000009994.5	Rac2	ENSRNOG0000007350	Rac family small GTPase 2 Source RGD Symbol Acc 1307568
G03	UPFR1087799	ENSRNOT00000013831.6	Raf1	ENSRNOG0000010153	Raf-1 proto-oncogene, serine/threonine kinase Source RGD Symbol Acc 3531
G04	UPFR1086713	ENSRNOT00000058382.4	Nfatc1	ENSRNOG0000017146	nuclear factor of activated T-cells 1 Source RGD Symbol Acc 2319357
G05	UPFR1018728	ENSRNOT00000017798.7	Sh2d2a	ENSRNOG0000013294	SH2 domain containing 2A Source RGD Symbol Acc 1303076
G06	UPFR1020994	ENSRNOT00000010714.5	Shc2	ENSRNOG0000008030	SHC adaptor protein 2 Source RGD Symbol Acc 1307137
G07	UPFR1081482	ENSRNOT00000032163.5	Sphk1	ENSRNOG0000010626	sphingosine kinase 1 Source RGD Symbol Acc 620048
G08	UPFR1019068	ENSRNOT00000028549.5	Sphk2	ENSRNOG0000021032	sphingosine kinase 2 Source RGD Symbol Acc 1307757
G09	UPFR1050158	ENSRNOT00000012739.4	Src	ENSRNOG0000009495	SRC proto-oncogene, non-receptor tyrosine kinase Source RGD Symbol Acc 620795
G10	UPFR1117908	ENSRNOT00000026559.5	Vegfa	ENSRNOG0000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
G11	UPFR1063692	ENSRNOT00000050891.3	Vegfb	ENSRNOG0000021156	vascular endothelial growth factor B Source RGD Symbol Acc 619799
G12	UPFR1108264	ENSRNOT00000015529.4	Vegfc	ENSRNOG0000011416	vascular endothelial growth factor C Source RGD Symbol Acc 619800
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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