

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

## Rat Liver Cancer

Cat. no. 249955 UPRN-133ZA

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	Adam17	Akt1	Angpt2	Bax	Bcl2	Bcl2l1	Bid	Birc2	Birc5	Casp8	Cd5	Cnd1
B	Ccnd2	Cdh1	Cdh13	Cdkn1a	Cdkn1b	Cdkn2a	Cflar	Ctnnb1	Cxcr4	Dab2ip	Dlc1	E2f1
C	Egf	Egfr	AABR0705853 9.1	Fadd	Fas	Cav1	Fhl1	Fzd7	Gadd45b	Gstp1	Hgf	Hhip
D	Hras	Igf2	Igfbp1	Igfbp3	Irs1	Irgb1	Kdr	Lef1	Ccl3	Met	Msh2	Msh3
E	Mtdh	Myc	NfkB1	Nras	Opcml	Pdgfra	Pin1	Plen	Ptgs2	Plk2	Pycard	Rac1
F	Rassf1	Rb1	Reln	Rhoa	Runx3	Sfrp2	Smad4	Smad7	Socs1	Socs3	Stat3	Tcf4
G	Tert	Tgfa	Tgfb1	Tgfb2	Tlr4	AABR0701832 3.1	Tnfrsf10	Tp53	Vegfa	Wt1	Xiap	Yap1
H	Actb	B2m	Hprt1	Ldha	Rplp1	RGDC	QIC	QIC	QIC	QIC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFR1096573	ENSRNOT00000081110.1	Adam17	ENSRNOG0000060694	ADAM metallopeptidase domain 17 Source RGD Symbol Acc 620404
A02	UPFR1083196	ENSRNOT00000031164.3	Akt1	ENSRNOG0000028629	AKT serine/threonine kinase 1 Source RGD Symbol Acc 2081
A03	UPFR1036335	ENSRNOT00000022774.6	Angpt2	ENSRNOG0000016696	angiopoietin 2 Source RGD Symbol Acc 621861
A04	UPFR1074536	ENSRNOT00000028328.5	Bax	ENSRNOG0000020876	BCL2 associated X, apoptosis regulator Source RGD Symbol Acc 2192
A05	UPFR1082998	ENSRNOT00000003768.2	Bcl2	ENSRNOG0000002791	BCL2, apoptosis regulator Source RGD Symbol Acc 2199
A06	UPFR1047186	ENSRNOT00000010762.7	Bcl2l1	ENSRNOG0000007946	Bcl2-like 1 Source RGD Symbol Acc 2200
A07	UPFR1018136	ENSRNOT00000016776.2	Bid	ENSRNOG0000012439	BH3 interacting domain death agonist Source RGD Symbol Acc 620160
A08	UPFR1050093	ENSRNOT00000014560.6	Birc2	ENSRNOG0000010602	baculoviral IAP repeat-containing 2 Source RGD Symbol Acc 620690
A09	UPFR1053500	ENSRNOT00000072387.1	Birc5	ENSRNOG0000050819	baculoviral IAP repeat-containing 5 Source RGD Symbol Acc 70499
A10	UPFR1030636	ENSRNOT00000016613.4	Casp8	ENSRNOG0000012331	caspase 8 Source RGD Symbol Acc 620945
A11	UPFR1019085	ENSRNOT00000014865.6	Ccl5	ENSRNOG0000010906	C-C motif chemokine ligand 5 Source RGD Symbol Acc 69069
A12	UPFR1042457	ENSRNOT00000088588.1	Ccnd1	ENSRNOG0000020918	cyclin D1 Source RGD Symbol Acc 68384
B01	UPFR1088052	ENSRNOT00000086440.1	Ccnd2	ENSRNOG0000057710	cyclin D2 Source RGD Symbol Acc 621083
B02	UPFR1037315	ENSRNOT00000027346.2	Cdh1	ENSRNOG0000020151	cadherin 1 Source RGD Symbol Acc 69279
B03	UPFR1116742	ENSRNOT00000019298.7	Cdh13	ENSRNOG0000014371	cadherin 13 Source RGD Symbol Acc 619745
B04	UPFR1028644	ENSRNOT00000091731.1	Cdkn1a	ENSRNOG0000000521	cyclin-dependent kinase inhibitor 1A Source RGD Symbol Acc 69328
B05	UPFR1069360	ENSRNOT00000049848.1	Cdkn1b	ENSRNOG0000007249	cyclin-dependent kinase inhibitor 1B Source RGD Symbol Acc 69062
B06	UPFR1104432	ENSRNOT00000079251.1	Cdkn2a	ENSRNOG0000059837	cyclin-dependent kinase inhibitor 2A Source RGD Symbol Acc 2323
B07	UPFR1108095	ENSRNOT00000016730.5	Cflar	ENSRNOG0000012473	CASP8 and FADD-like apoptosis regulator Source RGD Symbol Acc 620847
B08	UPFR1057605	ENSRNOT00000079085.1	Ctnnb1	ENSRNOG0000054172	catenin beta 1 Source RGD Symbol Acc 70487
B09	UPFR1030244	ENSRNOT00000005143.6	Cxcr4	ENSRNOG0000003866	C-X-C motif chemokine receptor 4 Source RGD Symbol Acc 620465
B10	UPFR1055137	ENSRNOT00000080760.1	Dab2ip	ENSRNOG0000055226	DAB2 interacting protein Source RGD Symbol Acc 621686
B11	UPFR1103627	ENSRNOT00000014924.3	Dlc1	ENSRNOG0000010780	DLC1 Rho GTPase activating protein Source RGD Symbol Acc 68416
B12	UPFR1077824	ENSRNOT00000022428.6	E2f1	ENSRNOG0000016708	N-terminal EF-hand calcium binding protein 3 Source RGD Symbol Acc 1310124
C01	UPFR1045222	ENSRNOT00000087007.1	Egf	ENSRNOG0000053979	epidermal growth factor Source RGD Symbol Acc 2542
C02	UPFR1091984	ENSRNOT00000006087.2	Egfr	ENSRNOG0000004332	epidermal growth factor receptor Source RGD Symbol Acc 2543
C03	UPFR1102114	ENSRNOT00000000206.7	AABR07058539.1	ENSRNOG0000000190	
C04	UPFR1101946	ENSRNOT00000075089.3	Fadd	ENSRNOG0000047035	Fas associated via death domain Source RGD Symbol Acc 628700
C05	UPFR1075141	ENSRNOT00000025928.5	Fas	ENSRNOG0000019142	Fas cell surface death receptor Source RGD Symbol Acc 619831
C06	UPFR1012931	ENSRNOT00000078250.1	Cav1	ENSRNOG0000056836	caveolin 1 Source RGD Symbol Acc 2280
C07	UPFR1070633	ENSRNOT00000001248.3	Ft1	ENSRNOG0000000940	FMS-related tyrosine kinase 1 Source RGD Symbol Acc 2621
C08	UPFR1085249	ENSRNOT00000021569.6	Fzd7	ENSRNOG0000016119	frizzled class receptor 7 Source RGD Symbol Acc 2321905
C09	UPFR1054309	ENSRNOT00000026871.4	Gadd45b	ENSRNOG0000019822	growth arrest and DNA-damage-inducible, beta Source RGD Symbol Acc 1309080
C10	UPFR1075260	ENSRNOT00000024601.4	Gstp1	ENSRNOG0000018237	glutathione S-transferase pi 1 Source RGD Symbol Acc 2758
		ENSRNOT000000		ENSRNOG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1076642	009763.5	Hgf	000007027	hepatocyte growth factor Source RGD Symbol Acc 2794
C12	UPFR1056218	ENSRNOT0000024616.7	Hhip	ENSRNOG0000018268	Hedgehog-interacting protein Source RGD Symbol Acc 1564108
D01	UPFR1076419	ENSRNOT0000022363.6	Hras	ENSRNOG0000016611	HRas proto-oncogene, GTPase Source RGD Symbol Acc 2827
D02	UPFR1085899	ENSRNOT00000089171.1	Igf2	ENSRNOG0000020369	insulin-like growth factor 2 Source RGD Symbol Acc 2870
D03	UPFR1053345	ENSRNOT00000077177.1	Igfbp1	ENSRNOG0000058780	insulin-like growth factor binding protein 1 Source RGD Symbol Acc 2872
D04	UPFR1013429	ENSRNOT00000088355.1	Igfbp3	ENSRNOG0000061910	insulin-like growth factor binding protein 3 Source RGD Symbol Acc 2874
D05	UPFR1099858	ENSRNOT00000019579.5	Irs1	ENSRNOG0000014597	insulin receptor substrate 1 Source RGD Symbol Acc 2922
D06	UPFR1091655	ENSRNOT00000014785.5	Itgb1	ENSRNOG0000010966	integrin subunit beta 1 Source RGD Symbol Acc 2927
D07	UPFR1041145	ENSRNOT00000085089.1	Kdr	ENSRNOG0000046829	kinase insert domain receptor Source RGD Symbol Acc 2965
D08	UPFR1076567	ENSRNOT00000013694.3	Lef1	ENSRNOG0000010121	lymphoid enhancer binding factor 1 Source RGD Symbol Acc 620241
D09	UPFR1057376	ENSRNOT00000015139.3	Ccl3	ENSRNOG0000011205	C-C motif chemokine ligand 3 Source RGD Symbol Acc 3647
D10	UPFR1071342	ENSRNOT00000086902.1	Met	ENSRNOG0000052745	MET proto-oncogene, receptor tyrosine kinase Source RGD Symbol Acc 3082
D11	UPFR1084978	ENSRNOT00000021538.7	Msh2	ENSRNOG0000015796	mutS homolog 2 Source RGD Symbol Acc 620786
D12	UPFR1101725	ENSRNOT00000018449.7	Msh3	ENSRNOG0000013673	mutS homolog 3 Source RGD Symbol Acc 1563954
E01	UPFR1071555	ENSRNOT00000009989.3	Mtdh	ENSRNOG0000006870	metadherin Source RGD Symbol Acc 620992
E02	UPFR1101439	ENSRNOT00000006188.5	Myc	ENSRNOG0000004500	MYC proto-oncogene, bHLH transcription factor Source RGD Symbol Acc 3130
E03	UPFR1116688	ENSRNOT00000036838.4	Nfkb1	ENSRNOG0000023258	nuclear factor kappa B subunit 1 Source RGD Symbol Acc 70498
E04	UPFR1038224	ENSRNOT00000039572.3	Nras	ENSRNOG0000023079	NRAS proto-oncogene, GTPase Source RGD Symbol Acc 3205
E05	UPFR1088228	ENSRNOT00000090643.1	Opcml	ENSRNOG0000023809	opioid binding protein/cell adhesion molecule-like 620635 Source RGD Symbol Acc 620635
E06	UPFR1089489	ENSRNOT00000003077.5	Pdgfra	ENSRNOG0000002244	platelet derived growth factor receptor alpha Source RGD Symbol Acc 3284
E07	UPFR1040697	ENSRNOT00000027818.5	Pin1	ENSRNOG0000020474	peptidylprolyl cis/trans isomerase, NIMA-interacting 1 Source RGD Symbol Acc 1310299
E08	UPFR1043890	ENSRNOT00000028143.3	Pten	ENSRNOG0000020723	phosphatase and tensin homolog Source RGD Symbol Acc 61995
E09	UPFR1035449	ENSRNOT00000003567.4	Ptgs2	ENSRNOG0000002525	prostaglandin-endoperoxide synthase 2 Source RGD Symbol Acc 620349
E10	UPFR1115915	ENSRNOT00000011219.6	Plk2	ENSRNOG0000007916	protein tyrosine kinase 2 Source RGD Symbol Acc 3443
E11	UPFR1097767	ENSRNOT00000026699.4	Pycard	ENSRNOG0000019675	PYD and CARD domain containing Source RGD Symbol Acc 628637
E12	UPFR1019271	ENSRNOT00000001417.5	Rac1	ENSRNOG0000010688	Rac family small GTPase 1 Source RGD Symbol Acc 619755
F01	UPFR1115677	ENSRNOT00000037375.6	Rassf1	ENSRNOG0000021548	Ras association domain family member 1 Source RGD Symbol Acc 1359383
F02	UPFR1039430	ENSRNOT00000021752.5	Rb1	ENSRNOG0000016029	RB transcriptional corepressor 1 Source RGD Symbol Acc 3540
F03	UPFR1088760	ENSRNOT00000010521.8	Reln	ENSRNOG0000021441	reelin Source RGD Symbol Acc 3553
F04	UPFR1119707	ENSRNOT00000071664.2	Rhoa	ENSRNOG0000050519	ras homolog family member A Source RGD Symbol Acc 619921
F05	UPFR1088816	ENSRNOT00000086650.1	Runx3	ENSRNOG0000054217	runt-related transcription factor 3 Source RGD Symbol Acc 620082
F06	UPFR1086653	ENSRNOT00000012658.6	Sfrp2	ENSRNOG0000009465	secreted frizzled-related protein 2 Source RGD Symbol Acc 735163
F07	UPFR1022605	ENSRNOT00000082484.1	Smad4	ENSRNOG0000051965	SMAD family member 4 Source RGD Symbol Acc 3033
F08	UPFR1092772	ENSRNOT00000024831.4	Smad7	ENSRNOG0000018359	SMAD family member 7 Source RGD Symbol Acc 69314
F09	UPFR1106307	ENSRNOT00000003458.3	Socs1	ENSRNOG0000002568	suppressor of cytokine signaling 1 Source RGD Symbol Acc 69272
F10	UPFR1069728	ENSRNOT00000003940.3	Socs3	ENSRNOG0000002946	suppressor of cytokine signaling 3 Source RGD Symbol Acc 621087

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1040072	ENSRNOT00000026760.4	Stat3	ENSRNOG0000019742	signal transducer and activator of transcription 3 Source RGD Symbol Acc 3772
F12	UPFR1028213	ENSRNOT00000081797.1	Tcf4	ENSRNOG0000012405	transcription factor 4 Source RGD Symbol Acc 69271
G01	UPFR1102859	ENSRNOT00000022683.4	Tert	ENSRNOG0000025327	telomerase reverse transcriptase Source RGD Symbol Acc 70494
G02	UPFR1060818	ENSRNOT00000057441.4	Tgfa	ENSRNOG0000016182	transforming growth factor alpha Source RGD Symbol Acc 3849
G03	UPFR1103881	ENSRNOT00000028051.4	Tgfb1	ENSRNOG0000020652	transforming growth factor, beta 1 Source RGD Symbol Acc 69051
G04	UPFR1107633	ENSRNOT00000037883.4	Tgfb2	ENSRNOG0000013265	transforming growth factor, beta receptor 2 Source RGD Symbol Acc 69651
G05	UPFR1020675	ENSRNOT00000014020.3	Tlr4	ENSRNOG0000010522	toll-like receptor 4 Source RGD Symbol Acc 3870
G06	UPFR1016844	ENSRNOT00000066128.4	AABR07018323.1	ENSRNOG0000038483	
G07	UPFR1107113	ENSRNOT00000017758.5	Tnfsf10	ENSRNOG0000013269	TNF superfamily member 10 Source RGD Symbol Acc 628734
G08	UPFR1095007	ENSRNOT00000085115.1	Tp53	ENSRNOG0000010756	tumor protein p53 Source RGD Symbol Acc 3889
G09	UPFR1117908	ENSRNOT00000026559.5	Vegfa	ENSRNOG0000019598	vascular endothelial growth factor A Source RGD Symbol Acc 619991
G10	UPFR1027373	ENSRNOT00000067940.3	Wt1	ENSRNOG0000013074	Wilms tumor 1 Source RGD Symbol Acc 3974
G11	UPFR1049285	ENSRNOT00000009336.3	Xiap	ENSRNOG0000006967	X-linked inhibitor of apoptosis Source RGD Symbol Acc 620692
G12	UPFR1026379	ENSRNOT00000007866.6	Yap1	ENSRNOG0000005933	yes-associated protein 1 Source RGD Symbol Acc 1306035
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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