

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

## Rat Unfolded Protein Response

Cat. no. 249955 UPRN-089ZA

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	Aif4	Aif6	Abxn3	Bax	Calr	Canx	Cct4	Cct7	Cebpb	Creb3	Creb3l1	Creb3l2
B	Creb3l3	Creb3l4	Ddit3	Derl1	Dnajb9	Dnajc10	Dnajc3	Dnajc4	Tor1a	Edem1	Edem2	Eif2a
C	Eif2ak2	Eif2ak3	Eif2ak4	Ern2	Ero1a	Fbxo6	Ganab	Herpud1	Herpud2	Hsp90b1	Hspa11	Hspa2
D	Hspa4	Hspa4l	Hspa5	Hspb9	Hsph1	Htra2	Htra4	Insig1	Insig2	Manf	Mapk10	Mapk8
E	Mapk9	Mbtps1	Mbtps2	Nploc4	Nucb1	Os9	Pdia3	Pfdn5	Pfdn6	Ppia	Ppib	Ppic
F	Ppp1r15a	Ppp1r15b	Prkcsb	Rnf139	Rpn1	Scap	Sec62	Sec63	Sel1l	Selenos	Serp1	Sil1
G	Srebfl	Srebfl2	Syn1	Tcp1	Ube2g2	Ube2j2	Ubxn4	Ufd1	Uggt1	Usp14	Vcp	Xbp1
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	UPFR1067882	ENSRNOT00000065304.4	Atf4	ENSRNOG0000017801	activating transcription factor 4 Source RGD Symbol Acc 621863
A02	UPFR1113100	ENSRNOT00000029202.5	Atf6	ENSRNOG0000024632	activating transcription factor 6 Source RGD Symbol Acc 1305471
A03	UPFR1071648	ENSRNOT00000007505.2	Atxn3	ENSRNOG0000005470	ataxin 3 Source RGD Symbol Acc 621567
A04	UPFR1074536	ENSRNOT00000028328.5	Bax	ENSRNOG0000020876	BCL2 associated X, apoptosis regulator Source RGD Symbol Acc 2192
A05	UPFR1077775	ENSRNOT00000004091.6	Calr	ENSRNOG0000003029	calreticulin Source RGD Symbol Acc 620288
A06	UPFR1061148	ENSRNOT00000049942.4	Canx	ENSRNOG0000003343	calnexin Source RGD Symbol Acc 2266
A07	UPFR1105932	ENSRNOT00000012847.3	Cct4	ENSRNOG0000009642	chaperonin containing TCP1 subunit 4 Source RGD Symbol Acc 727937
A08	UPFR1021131	ENSRNOT00000021030.5	Cct7	ENSRNOG0000015630	chaperonin containing TCP1 subunit 7 Source RGD Symbol Acc 1306422
A09	UPFR1126579	ENSRNOT00000083876.1	Cebpb	ENSRNOG0000057347	CCAAT/enhancer binding protein beta Source RGD Symbol Acc 2327
A10	UPFR1100959	ENSRNOT00000065909.1	Creb3	ENSRNOG0000016452	cAMP responsive element binding protein 3 Source RGD Symbol Acc 1308831
A11	UPFR1115370	ENSRNOT00000007771.3	Creb3l1	ENSRNOG0000005413	cAMP responsive element binding protein 3-like 1 Source RGD Symbol Acc 1359613
A12	UPFR1112909	ENSRNOT00000017338.5	Creb3l2	ENSRNOG0000012826	cAMP responsive element binding protein 3-like 2 Source RGD Symbol Acc 1306040
B01	UPFR1028522	ENSRNOT00000044484.3	Creb3l3	ENSRNOG0000032202	cAMP responsive element binding protein 3-like 3 Source RGD Symbol Acc 1308152
B02	UPFR1093577	ENSRNOT00000032062.4	Creb3l4	ENSRNOG0000023493	cAMP responsive element binding protein 3-like 4 Source RGD Symbol Acc 1359278
B03	UPFR1119718	ENSRNOT00000008941.5	Ddit3	ENSRNOG0000006789	DNA-damage inducible transcript 3 Source RGD Symbol Acc 62391
B04	UPFR1083394	ENSRNOT00000007484.5	Derl1	ENSRNOG0000005551	derlin 1 Source RGD Symbol Acc 1311835
B05	UPFR1035857	ENSRNOT00000005363.5	Dnajb9	ENSRNOG0000004006	DnaJ heat shock protein family (Hsp40) member B9 Source RGD Symbol Acc 3070
B06	UPFR1088801	ENSRNOT00000009839.4	Dnajc10	ENSRNOG0000006803	DnaJ heat shock protein family (Hsp40) member C10 Source RGD Symbol Acc 1307813
B07	UPFR1032628	ENSRNOT00000014182.5	Dnajc3	ENSRNOG0000010352	DnaJ heat shock protein family (Hsp40) member C3 Source RGD Symbol Acc 708518
B08	UPFR1062488	ENSRNOT00000028731.5	Dnajc4	ENSRNOG0000043060	DnaJ heat shock protein family (Hsp40) member C4 Source RGD Symbol Acc 1308693
B09	UPFR1093419	ENSRNOT00000064660.3	Tor1a	ENSRNOG0000006894	torsin family 1, member A Source RGD Symbol Acc 628863
B10	UPFR1059131	ENSRNOT00000088273.1	Edem1	ENSRNOG0000055365	ER degradation enhancing alpha-mannosidase like protein 1 Source RGD Symbol Acc 1563633
B11	UPFR1060143	ENSRNOT00000026120.5	Edem2	ENSRNOG0000019299	ER degradation enhancing alpha-mannosidase like protein 2 Source RGD Symbol Acc 1303074
B12	UPFR1112825	ENSRNOT00000018022.6	Eif2a	ENSRNOG0000013393	eukaryotic translation initiation factor 2A Source RGD Symbol Acc 1589591
C01	UPFR1062762	ENSRNOT00000072810.2	Eif2ak2	ENSRNOG0000048315	eukaryotic translation initiation factor 2-alpha kinase 2 Source RGD Symbol Acc 3402
C02	UPFR1090219	ENSRNOT00000008451.5	Eif2ak3	ENSRNOG0000006069	eukaryotic translation initiation factor 2 alpha kinase 3 Source RGD Symbol Acc 70884
C03	UPFR1101754	ENSRNOT00000009222.7	Eif2ak4	ENSRNOG0000006027	eukaryotic translation initiation factor 2 alpha kinase 4 Source RGD Symbol Acc 1311439
C04	UPFR1104894	ENSRNOT00000025699.4	Ern2	ENSRNOG0000018974	endoplasmic reticulum to nucleus signaling 2 Source RGD Symbol Acc 1308743
C05	UPFR1077716	ENSRNOT00000009404.6	Ero1a	ENSRNOG0000006462	endoplasmic reticulum oxidoreductase 1 alpha Source RGD Symbol Acc 621713
C06	UPFR1055477	ENSRNOT00000012301.4	Fbxo6	ENSRNOG0000009217	F-box protein 6 Source RGD Symbol Acc 620418
C07	UPFR1023347	ENSRNOT00000035650.2	Ganab	ENSRNOG0000019724	glucosidase II alpha subunit Source RGD Symbol Acc 1309775
C08	UPFR1015276	ENSRNOT00000025559.5	Herpud1	ENSRNOG0000018796	homocysteine inducible ER protein with ubiquitin like domain 1 Source RGD Symbol Acc 620818
C09	UPFR1058757	ENSRNOT00000046432.3	Herpud2	ENSRNOG0000029995	HERPUD family member 2 Source RGD Symbol Acc 1307343
C10	UPFR1020204	ENSRNOT00000079731.1	Hsp90b1	ENSRNOG0000026963	heat shock protein 90 beta family member 1 Source RGD Symbol Acc 1310482
		ENSRNOT000000		ENSRNOG00	heat shock protein family A (Hsp70) member 1 like Source RGD Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFR1120774	074223.2	Hspa11	000047966	1595925
C12	UPFR1042960	ENSRNOT0000008504.5	Hspa2	ENSRNOG0000006472	heat shock protein family A member 2 Source RGD Symbol Acc 620664
D01	UPFR1042317	ENSRNOT00000023628.3	Hspa4	ENSRNOG0000016596	heat shock protein family A member 4 Source RGD Symbol Acc 628878
D02	UPFR1106328	ENSRNOT00000015474.6	Hspa4l	ENSRNOG0000010819	heat shock protein family A (Hsp70) member 4 like Source RGD Symbol Acc 1306528
D03	UPFR1074347	ENSRNOT00000025067.6	Hspa5	ENSRNOG0000018294	heat shock protein family A member 5 Source RGD Symbol Acc 2843
D04	UPFR1033263	ENSRNOT00000055248.2	Hspb9	ENSRNOG0000036819	heat shock protein family B (small) member 9 Source RGD Symbol Acc 1309122
D05	UPFR1059645	ENSRNOT00000001201.7	Hsph1	ENSRNOG0000000902	heat shock protein family H (Hsp110) member 1 Source RGD Symbol Acc 1311609
D06	UPFR1113334	ENSRNOT00000037333.5	Htra2	ENSRNOG0000022448	HtrA serine peptidase 2 Source RGD Symbol Acc 1308906
D07	UPFR1099377	ENSRNOT00000080084.1	Htra4	ENSRNOG0000061160	HtrA serine peptidase 4 Source RGD Symbol Acc 1306242
D08	UPFR1098045	ENSRNOT00000009233.6	Insig1	ENSRNOG0000006859	insulin induced gene 1 Source RGD Symbol Acc 708457
D09	UPFR1037341	ENSRNOT00000003391.5	Insig2	ENSRNOG0000002478	insulin induced gene 2 Source RGD Symbol Acc 631417
D10	UPFR1047860	ENSRNOT00000019107.7	Manf	ENSRNOG0000014201	mesencephalic astrocyte-derived neurotrophic factor Source RGD Symbol Acc 1307252
D11	UPFR1062108	ENSRNOT00000092395.1	Mapk10	ENSRNOG0000002079	mitogen activated protein kinase 10 Source RGD Symbol Acc 3663
D12	UPFR1048766	ENSRNOT00000065216.3	Mapk8	ENSRNOG0000020155	mitogen-activated protein kinase 8 Source RGD Symbol Acc 621506
E01	UPFR1038865	ENSRNOT00000083688.1	Mapk9	ENSRNOG0000002823	mitogen-activated protein kinase 9 Source RGD Symbol Acc 628847
E02	UPFR1112783	ENSRNOT00000020838.7	Mbtps1	ENSRNOG0000015173	membrane-bound transcription factor peptidase, site 1 Source RGD Symbol Acc 70935
E03	UPFR1012885	ENSRNOT00000033010.4	Mbtps2	ENSRNOG0000007644	membrane-bound transcription factor peptidase, site 2 Source RGD Symbol Acc 1566171
E04	UPFR1070261	ENSRNOT00000080188.1	Nploc4	ENSRNOG0000036698	NPL4 homolog, ubiquitin recognition factor Source RGD Symbol Acc 620794
E05	UPFR1031525	ENSRNOT00000028390.5	Nucb1	ENSRNOG0000020889	nucleobindin 1 Source RGD Symbol Acc 620030
E06	UPFR1061906	ENSRNOT00000049895.3	Os9	ENSRNOG0000025570	OS9, endoplasmic reticulum lectin Source RGD Symbol Acc 1359574
E07	UPFR1061944	ENSRNOT00000020478.7	Pdia3	ENSRNOG0000015018	protein disulfide isomerase family A, member 3 Source RGD Symbol Acc 68430
E08	UPFR1033846	ENSRNOT00000017794.5	Pfdn5	ENSRNOG0000012985	prefoldin subunit 5 Source RGD Symbol Acc 1311436
E09	UPFR1039148	ENSRNOT00000092555.1	Pfdn6	ENSRNOG0000000473	prefoldin subunit 6 Source RGD Symbol Acc 1303006
E10	UPFR1113845	ENSRNOT00000079015.1	Ppia	ENSRNOG0000027864	peptidylprolyl isomerase A Source RGD Symbol Acc 3372
E11	UPFR1106039	ENSRNOT00000022828.7	Ppib	ENSRNOG0000016781	peptidylprolyl isomerase B Source RGD Symbol Acc 620312
E12	UPFR1048050	ENSRNOT00000023485.4	Ppic	ENSRNOG0000017416	peptidylprolyl isomerase C Source RGD Symbol Acc 1303221
F01	UPFR1020390	ENSRNOT00000044788.4	Ppp1r15a	ENSRNOG0000020938	protein phosphatase 1, regulatory subunit 15A Source RGD Symbol Acc 621526
F02	UPFR1099808	ENSRNOT00000037039.6	Ppp1r15b	ENSRNOG0000028493	protein phosphatase 1, regulatory subunit 15B Source RGD Symbol Acc 1307944
F03	UPFR1041026	ENSRNOT00000018009.6	Prkcs	ENSRNOG0000013360	protein kinase C substrate 80K-H Source RGD Symbol Acc 1309628
F04	UPFR1032442	ENSRNOT00000011891.7	Rnf139	ENSRNOG0000008987	ring finger protein 139 Source RGD Symbol Acc 1306670
F05	UPFR1112990	ENSRNOT00000073429.2	Rpn1	ENSRNOG0000046345	ribophorin I Source RGD Symbol Acc 3594
F06	UPFR1044319	ENSRNOT00000028295.7	Scap	ENSRNOG0000020853	SREBF chaperone Source RGD Symbol Acc 1309378
F07	UPFR1103894	ENSRNOT00000012240.4	Sec62	ENSRNOG0000009057	SEC62 homolog, preprotein translocation factor Source RGD Symbol Acc 1308862
F08	UPFR1030722	ENSRNOT00000036365.5	Sec63	ENSRNOG0000000314	SEC63 homolog, protein translocation regulator Source RGD Symbol Acc 1304984
F09	UPFR1047588	ENSRNOT00000006143.6	Sel1l	ENSRNOG0000004464	SEL1L ERAD E3 ligase adaptor subunit Source RGD Symbol Acc 620147
F10	UPFR1031170	ENSRNOT00000016916.6	Selenos	ENSRNOG0000012576	selenoprotein S Source RGD Symbol Acc 628897

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFR1021269	ENSRNOT00000017868.5	Serp1	ENSRNOG0000011763	stress-associated endoplasmic reticulum protein 1 Source RGD Symbol Acc 620790
F12	UPFR1033396	ENSRNOT00000026895.5	Sil1	ENSRNOG0000019826	SIL1 nucleotide exchange factor Source RGD Symbol Acc 735103
G01	UPFR1104408	ENSRNOT00000004753.5	Sreb1	ENSRNOG0000003463	sterol regulatory element binding transcription factor 1 Source RGD Symbol Acc 69423
G02	UPFR1026089	ENSRNOT00000082603.1	Sreb2	ENSRNOG0000007400	sterol regulatory element binding transcription factor 2 Source RGD Symbol Acc 1307751
G03	UPFR1098645	ENSRNOT00000028462.6	Syn1	ENSRNOG0000020950	synoviolin 1 Source RGD Symbol Acc 1310488
G04	UPFR1028029	ENSRNOT00000019531.4	Tcp1	ENSRNOG0000014160	t-complex 1 Source RGD Symbol Acc 3832
G05	UPFR1102396	ENSRNOT00000001636.7	Ube2g2	ENSRNOG0000001222	ubiquitin-conjugating enzyme E2G 2 Source RGD Symbol Acc 1304860
G06	UPFR1095108	ENSRNOT00000026752.7	Ube2j2	ENSRNOG0000019749	ubiquitin-conjugating enzyme E2, J2 Source RGD Symbol Acc 1359523
G07	UPFR1043714	ENSRNOT00000004878.7	Ubxn4	ENSRNOG0000003625	UBX domain protein 4 Source RGD Symbol Acc 1307451
G08	UPFR1108199	ENSRNOT00000071493.2	Ufd1	ENSRNOG0000047394	ubiquitin recognition factor in ER associated degradation 1 Source RGD Symbol Acc 619822
G09	UPFR1047848	ENSRNOT00000020558.5	Uggf1	ENSRNOG0000014901	UDP-glucose glycoprotein glucosyltransferase 1 Source RGD Symbol Acc 619710
G10	UPFR1110584	ENSRNOT00000020537.6	Usp14	ENSRNOG0000014981	ubiquitin specific peptidase 14 Source RGD Symbol Acc 1311825
G11	UPFR1091048	ENSRNOT00000046102.2	Vcp	ENSRNOG0000034242	valosin-containing protein Source RGD Symbol Acc 621595
G12	UPFR1118728	ENSRNOT00000014044.6	Xbp1	ENSRNOG0000010298	X-box binding protein 1 Source RGD Symbol Acc 1303073
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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