

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

Human mTOR Signaling

Cat. no. 249955 UPHS-098ZA

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 for further details.

	1	2	3	4	5	6	7	8	9	10	11	12
A	AKT1	AKT1S1	AKT2	AKT3	CAB39	CAB39L	CDC42	CHUK	DDIT4	DDIT4L	DEPTOR	EIF4B
B	EIF4E	EIF4EBP1	EIF4EBP2	FKBP1A	FKBP8	GSK3B	HIF1A	HRAS	HSPA4	IGF1	IGFBP3	IKKBK
C	ILK	INS	INSR	IRS1	MAPK1	MAPK3	MAPKAP1	MLST8	MTOR	MYO1C	PDPK1	PIK3C3
D	PIK3CA	PIK3CB	PIK3CD	PIK3CG	PLD1	PLD2	PPP2CA	PPP2R2B	PTPA	PRKAA1	PRKAA2	PRKAB1
E	PRKAB2	PRKAG1	PRKAG2	PRKAG3	PRKCA	PRKCB	PRKCE	PRKCG	PTEN	RHEB	RHOA	RICTOR
F	RPS6	RPS6KA1	RPS6KA2	RPS6KA5	RPS6KB1	RPS6KB2	RPTOR	RRAGA	RRAGB	RRAGC	RRAGD	SGK1
G	STK11	STRADB	TELO2	TP53	TSC1	TSC2	ULK1	ULK2	VEGFA	VEGFB	VEGFC	YWHAG
H	ACTB	B2M	GAPDH	HPRT1	RPLP0	HGDC	QIC	QIC	QIC	PPC	PPC	PPC

Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFH0453992	ENST00000555528.5	AKT1	ENSG00000142208	AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391
A02	UPFH0350775	ENST00000391835.1	AKT1S1	ENSG00000204673	AKT1 substrate 1 Source HGNC Symbol Acc HGNC 28426
A03	UPFH0246744	ENST00000441941.6	AKT2	ENSG00000105221	AKT serine/threonine kinase 2 Source HGNC Symbol Acc HGNC 392
A04	UPFH0198803	ENST00000336199.9	AKT3	ENSG00000117020	AKT serine/threonine kinase 3 Source HGNC Symbol Acc HGNC 393
A05	UPFH0110738	ENST00000258418.10	CAB39	ENSG00000135932	calcium binding protein 39 Source HGNC Symbol Acc HGNC 20292
A06	UPFH0393661	ENST00000457041.5	CAB39L	ENSG00000102547	calcium binding protein 39 like Source HGNC Symbol Acc HGNC 20290
A07	UPFH0571108	ENST00000400259.5	CDC42	ENSG00000070831	cell division cycle 42 Source HGNC Symbol Acc HGNC 1736
A08	UPFH1132316	ENST00000370397.8	CHUK	ENSG00000213341	conserved helix-loop-helix ubiquitous kinase Source HGNC Symbol Acc HGNC 1974
A09	UPFH0269420	ENST00000307365.4	DDIT4	ENSG00000168209	DNA damage inducible transcript 4 Source HGNC Symbol Acc HGNC 24944
A10	UPFH0363515	ENST00000273990.6	DDIT4L	ENSG00000145358	DNA damage inducible transcript 4 like Source HGNC Symbol Acc HGNC 30555
A11	UPFH0316932	ENST00000518057.1	DEPTOR	ENSG00000155792	DEP domain containing MTOR interacting protein Source HGNC Symbol Acc HGNC 22953
A12	UPFH0228907	ENST00000550025.1	EIF4B	ENSG00000063046	eukaryotic translation initiation factor 4B Source HGNC Symbol Acc HGNC 3285
B01	UPFH0008084	ENST00000515638.5	EIF4E	ENSG00000151247	eukaryotic translation initiation factor 4E Source HGNC Symbol Acc HGNC 3287
B02	UPFH0096211	ENST00000520657.1	EIF4EBP1	ENSG00000187840	eukaryotic translation initiation factor 4E binding protein 1 Source HGNC Symbol Acc HGNC 3288
B03	UPFH0556168	ENST00000373218.5	EIF4EBP2	ENSG00000148730	eukaryotic translation initiation factor 4E binding protein 2 Source HGNC Symbol Acc HGNC 3289
B04	UPFH0317247	ENST00000474657.5	FKBP1A	ENSG00000088832	FKBP prolyl isomerase 1A Source HGNC Symbol Acc HGNC 3711
B05	UPFH0397070	ENST00000601844.5	FKBP8	ENSG00000105701	FKBP prolyl isomerase 8 Source HGNC Symbol Acc HGNC 3724
B06	UPFH0470775	ENST00000316626.5	GSK3B	ENSG00000082701	glycogen synthase kinase 3 beta Source HGNC Symbol Acc HGNC 4617
B07	UPFH1132447	ENST00000394997.5	HIF1A	ENSG00000100644	hypoxia inducible factor 1 subunit alpha Source HGNC Symbol Acc HGNC 4910
B08	UPFH1132981	ENST00000311189.8	HRAS	ENSG00000174775	HRas proto-oncogene, GTPase Source HGNC Symbol Acc HGNC 5173
B09	UPFH1132457	ENST00000304858.7	HSPA4	ENSG00000170606	heat shock protein family A (Hsp70) member 4 Source HGNC Symbol Acc HGNC 5237
B10	UPFH0229443	ENST00000337514.10	IGF1	ENSG00000017427	insulin like growth factor 1 Source HGNC Symbol Acc HGNC 5464
B11	UPFH1132893	ENST00000275521.10	IGFBP3	ENSG00000146674	insulin like growth factor binding protein 3 Source HGNC Symbol Acc HGNC 5472
B12	UPFH0596293	ENST00000649612.2	IKKB	ENSG00000104365	inhibitor of nuclear factor kappa B kinase subunit beta Source HGNC Symbol Acc HGNC 5960
C01	UPFH0412404	ENST00000299421.8	ILK	ENSG00000166333	integrin linked kinase Source HGNC Symbol Acc HGNC 6040
C02	UPFH1132488	ENST00000381330.4	INS	ENSG00000254647	insulin Source HGNC Symbol Acc HGNC 6081
C03	UPFH0483358	ENST00000598216.1	INSR	ENSG00000171105	insulin receptor Source HGNC Symbol Acc HGNC 6091
C04	UPFH0592509	ENST00000305123.5	IRS1	ENSG00000169047	insulin receptor substrate 1 Source HGNC Symbol Acc HGNC 6125
C05	UPFH0366815	ENST00000215832.10	MAPK1	ENSG00000100030	mitogen-activated protein kinase 1 Source HGNC Symbol Acc HGNC 6871
C06	UPFH1132534	ENST00000481230.1	MAPK3	ENSG00000102882	mitogen-activated protein kinase 3 Source HGNC Symbol Acc HGNC 6877
C07	UPFH1124952	ENST00000350766.7	MAPKAP1	ENSG00000119487	mitogen-activated protein kinase associated protein 1 Source HGNC Symbol Acc HGNC 18752
C08	UPFH0081485	ENST00000565687.5	MLST8	ENSG00000167965	MTOR associated protein, LST8 homolog Source HGNC Symbol Acc HGNC 24825
C09	UPFH1132560	ENST00000361445.8	MTOR	ENSG00000198793	mechanistic target of rapamycin kinase Source HGNC Symbol Acc HGNC 3942
C10	UPFH0551335	ENST00000438665.6	MYO1C	ENSG00000197879	myosin IC Source HGNC Symbol Acc HGNC 7597
		ENST00000389		ENSG000000	3-phosphoinositide dependent protein kinase 1 Source HGNC Symbol Acc

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0104991	224.7	PDPK1	140992	HGNC 8816
C12	UPFH1132623	ENST00000262039.9	PIK3C3	ENSG00000078142	phosphatidylinositol 3-kinase catalytic subunit type 3 Source HGNC Symbol Acc HGNC 8974
D01	UPFH0109251	ENST00000462255.1	PIK3CA	ENSG00000121879	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha Source HGNC Symbol Acc HGNC 8975
D02	UPFH0355077	ENST00000469284.6	PIK3CB	ENSG00000051382	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta Source HGNC Symbol Acc HGNC 8976
D03	UPFH0157436	ENST00000361110.6	PIK3CD	ENSG00000171608	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta Source HGNC Symbol Acc HGNC 8977
D04	UPFH0562261	ENST00000473541.5	PIK3CG	ENSG00000105851	phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma Source HGNC Symbol Acc HGNC 8978
D05	UPFH0135916	ENST00000446289.1	PLD1	ENSG00000075651	phospholipase D1 Source HGNC Symbol Acc HGNC 9067
D06	UPFH0141904	ENST00000575246.6	PLD2	ENSG00000129219	phospholipase D2 Source HGNC Symbol Acc HGNC 9068
D07	UPFH0120233	ENST00000522385.1	PPP2CA	ENSG00000113575	protein phosphatase 2 catalytic subunit alpha Source HGNC Symbol Acc HGNC 9299
D08	UPFH0007506	ENST00000336640.10	PPP2R2B	ENSG00000156475	protein phosphatase 2 regulatory subunit Bbeta Source HGNC Symbol Acc HGNC 9305
D09	UPFH0273368	ENST00000419582.5	PTPA	ENSG00000119383	protein phosphatase 2 phosphatase activator Source HGNC Symbol Acc HGNC 9308
D10	UPFH0363221	ENST00000397128.6	PRKAA1	ENSG00000132356	protein kinase AMP-activated catalytic subunit alpha 1 Source HGNC Symbol Acc HGNC 9376
D11	UPFH0310374	ENST00000610361.1	PRKAA2	ENSG00000162409	protein kinase AMP-activated catalytic subunit alpha 2 Source HGNC Symbol Acc HGNC 9377
D12	UPFH0062531	ENST00000545223.1	PRKAB1	ENSG00000111725	protein kinase AMP-activated non-catalytic subunit beta 1 Source HGNC Symbol Acc HGNC 9378
E01	UPFH0607399	ENST00000474939.1	PRKAB2	ENSG00000131791	protein kinase AMP-activated non-catalytic subunit beta 2 Source HGNC Symbol Acc HGNC 9379
E02	UPFH0066787	ENST00000548065.6	PRKAG1	ENSG00000181929	protein kinase AMP-activated non-catalytic subunit gamma 1 Source HGNC Symbol Acc HGNC 9385
E03	UPFH0382293	ENST00000287878.9	PRKAG2	ENSG00000106617	protein kinase AMP-activated non-catalytic subunit gamma 2 Source HGNC Symbol Acc HGNC 9386
E04	UPFH0385179	ENST00000490971.1	PRKAG3	ENSG00000115592	protein kinase AMP-activated non-catalytic subunit gamma 3 Source HGNC Symbol Acc HGNC 9387
E05	UPFH0607768	ENST00000578063.5	PRKCA	ENSG00000154229	protein kinase C alpha Source HGNC Symbol Acc HGNC 9393
E06	UPFH0529104	ENST00000646168.1	PRKCB	ENSG00000166501	protein kinase C beta Source HGNC Symbol Acc HGNC 9395
E07	UPFH0050276	ENST00000306156.8	PRKCE	ENSG00000171132	protein kinase C epsilon Source HGNC Symbol Acc HGNC 9401
E08	UPFH0047967	ENST00000474397.5	PRKCG	ENSG00000126583	protein kinase C gamma Source HGNC Symbol Acc HGNC 9402
E09	UPFH1132982	ENST00000371953.8	PTEN	ENSG00000171862	phosphatase and tensin homolog Source HGNC Symbol Acc HGNC 9588
E10	UPFH0068695	ENST00000472642.5	RHEB	ENSG00000106615	Ras homolog, mTORC1 binding Source HGNC Symbol Acc HGNC 10011
E11	UPFH1132657	ENST00000445425.4	RHOA	ENSG00000067560	ras homolog family member A Source HGNC Symbol Acc HGNC 667
E12	UPFH0556869	ENST00000513566.1	RICTOR	ENSG00000164327	RPTOR independent companion of MTOR complex 2 Source HGNC Symbol Acc HGNC 28611
F01	UPFH0211206	ENST00000315377.4	RPS6	ENSG00000137154	ribosomal protein S6 Source HGNC Symbol Acc HGNC 10429
F02	UPFH0220518	ENST00000374168.7	RPS6KA1	ENSG00000117676	ribosomal protein S6 kinase A1 Source HGNC Symbol Acc HGNC 10430
F03	UPFH0445093	ENST00000512860.5	RPS6KA2	ENSG00000071242	ribosomal protein S6 kinase A2 Source HGNC Symbol Acc HGNC 10431
F04	UPFH1122533	ENST00000556178.5	RPS6KA5	ENSG00000100784	ribosomal protein S6 kinase A5 Source HGNC Symbol Acc HGNC 10434
F05	UPFH1132665	ENST00000406116.7	RPS6KB1	ENSG00000108443	ribosomal protein S6 kinase B1 Source HGNC Symbol Acc HGNC 10436
F06	UPFH0358202	ENST00000312629.10	RPS6KB2	ENSG00000175634	ribosomal protein S6 kinase B2 Source HGNC Symbol Acc HGNC 10437
F07	UPFH0315022	ENST00000577161.5	RPTOR	ENSG00000141564	regulatory associated protein of MTOR complex 1 Source HGNC Symbol Acc HGNC 30287
F08	UPFH0507575	ENST00000380527.2	RRAGA	ENSG00000155876	Ras related GTP binding A Source HGNC Symbol Acc HGNC 16963
F09	UPFH0381289	ENST00000475061.1	RRAGB	ENSG00000083750	Ras related GTP binding B Source HGNC Symbol Acc HGNC 19901
F10	UPFH0426597	ENST00000474456.1	RRAGC	ENSG00000116954	Ras related GTP binding C Source HGNC Symbol Acc HGNC 19902

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0175493	ENST00000492783.1	RRAGD	ENSG0000025039	Ras related GTP binding D Source HGNC Symbol Acc HGNC 19903
F12	UPFH0010225	ENST00000367855.7	SGK1	ENSG00000118515	serum/glucocorticoid regulated kinase 1 Source HGNC Symbol Acc HGNC 10810
G01	UPFH0426138	ENST00000586358.5	STK11	ENSG00000118046	serine/threonine kinase 11 Source HGNC Symbol Acc HGNC 11389
G02	UPFH0120726	ENST00000468123.1	STRADB	ENSG00000082146	STE20 related adaptor beta Source HGNC Symbol Acc HGNC 13205
G03	UPFH0449433	ENST00000567423.1	TELO2	ENSG00000100726	telomere maintenance 2 Source HGNC Symbol Acc HGNC 29099
G04	UPFH0565795	ENST00000269305.8	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G05	UPFH0485358	ENST00000642745.1	TSC1	ENSG00000165699	TSC complex subunit 1 Source HGNC Symbol Acc HGNC 12362
G06	UPFH0065391	ENST00000643088.1	TSC2	ENSG00000103197	TSC complex subunit 2 Source HGNC Symbol Acc HGNC 12363
G07	UPFH1132747	ENST00000321867.6	ULK1	ENSG00000177169	unc-51 like autophagy activating kinase 1 Source HGNC Symbol Acc HGNC 12558
G08	UPFH1132748	ENST00000395544.9	ULK2	ENSG00000083290	unc-51 like autophagy activating kinase 2 Source HGNC Symbol Acc HGNC 13480
G09	UPFH0281656	ENST00000425836.6	VEGFA	ENSG00000112715	vascular endothelial growth factor A Source HGNC Symbol Acc HGNC 12680
G10	UPFH0523097	ENST00000309422.6	VEGFB	ENSG00000173511	vascular endothelial growth factor B Source HGNC Symbol Acc HGNC 12681
G11	UPFH1132755	ENST00000618562.2	VEGFC	ENSG00000150630	vascular endothelial growth factor C Source HGNC Symbol Acc HGNC 12682
G12	UPFH0056437	ENST00000474715.1	YWHAQ	ENSG00000134308	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein theta Source HGNC Symbol Acc HGNC 12854
H01	UPFH1132936	ENST00000646664.1	ACTB	ENSG00000075624	actin beta Source HGNC Symbol Acc HGNC 132
H02	UPFH1132937	ENST00000544417.5	B2M	ENSG00000166710	beta-2-microglobulin Source HGNC Symbol Acc HGNC 914
H03	UPFH1132938	ENST00000229239.10	GAPDH	ENSG00000111640	glyceraldehyde-3-phosphate dehydrogenase Source HGNC Symbol Acc HGNC 4141
H04	UPFH1132939	ENST00000298556.8	HPRT1	ENSG00000165704	hypoxanthine phosphoribosyltransferase 1 Source HGNC Symbol Acc HGNC 5157
H05	UPFH1132941	ENST00000392514.9	RPLP0	ENSG00000089157	ribosomal protein lateral stalk subunit P0 Source HGNC Symbol Acc HGNC 10371
H06	UPFH1126608	UPL_HGDC	HGDC	UPL_HGDC	Human 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 μ l reactions: 20 μ l 8x gDNA Removal Mix, 10 μ l Reverse Transcription Enzyme, 40 μ l Reverse Transcription Mix (containing RT primers), 20 μ l Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova Probe RT-PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 μ l QuantiNova Probe RT Mix, 20 μ l Internal Control RNA, 500 μ l Yellow Template Dilution Buffer, 250 μ l ROX Reference Dye, 1.9 μ l RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 μ l reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 μ l QuantiNova Yellow Template Dilution Buffer, 250 μ 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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