QuantiNova® LNA® Probe PCR Focus Panels (Rotor-Gene® Format)

Human AMPK Signaling

Cat. no. 249955 UPHS-175ZR

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 (Rotor-Gene): QuantiNova LNA Probe PCR Focus Panel

The 96 real-time assays in the Rotor-Gene format are located in wells 1–96 of the Rotor-Disc® (plate A1–A12=Rotor-Disc 1–12, plate B1–B12=Rotor-Disc 13–24, etc.). To maintain data analysis compatibility, wells 97–100 do not contain real-time assays but will contain master mix to account for weight balance. 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	ACACA	ACACB	ADIPOR1	ADIPOR2	ADRA1A	ADRA1B	ADRA1D	ADRA2A	ADRA2B	ADRA2C	AK1	AK2
B	AK3	AKT1	AKT2	AKT3	ATG13	CAB39	CAMKK1	CAMKK2	CHRNA1	CHRNB1	CPT1A	CPT1B
C	CPT1C	CPT2	CRTC2	CRY1	EEF2K	EIF4EBP1	ELAVL1	FASN	FOXO3	GPAM	GPAT2	GYS1
D	GYS2	HMGCR	HNF4A	INSR	LEPR	LIPE	MLYCD	MTOR	PDPK1	PFKFB1	PFKFB2	PFKFB3
E	PFKFB4	PNPLA2	PPARGC1A	PPARGC1B	PPP2CA	PPP2CB	PPP2R1A	PPP2R1B	PPP2R2B	PTPA	PRKAA1	PRKAA2
F	PRKAB1	PRKAB2	PRKACA	PRKACB	PRKAG1	PRKAG2	PRKAG3	PRKAR1A	PRKAR1B	PRKAR2A	PRKAR2B	RB1CC1
G	RPS6KB1	RPS6KB2	RPTOR	SLC2A4	SREBF1	STK11	STRADA	STRADB	TP53	TSC1	TSC2	ULK1
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	UPFH0196586	ENST00000617649.4	ACACA	ENSG00000278540	acetyl-CoA carboxylase alpha Source HGNC Symbol Acc HGNC 84
A02	UPFH0129563	ENST00000396233.4	ACACB	ENSG00000076555	acetyl-CoA carboxylase beta Source HGNC Symbol Acc HGNC 85
A03	UPFH0106515	ENST00000367254.7	ADIPOR1	ENSG00000159346	adiponectin receptor 1 Source HGNC Symbol Acc HGNC 24040
A04	UPFH0573163	ENST00000357103.5	ADIPOR2	ENSG00000006831	adiponectin receptor 2 Source HGNC Symbol Acc HGNC 24041
A05	UPFH0101462	ENST00000380586.5	ADRA1A	ENSG00000120907	adrenoceptor alpha 1A Source HGNC Symbol Acc HGNC 277
A06	UPFH0458556	ENST00000306675.5	ADRA1B	ENSG00000170214	adrenoceptor alpha 1B Source HGNC Symbol Acc HGNC 278
A07	UPFH0065785	ENST00000379453.5	ADRA1D	ENSG00000171873	adrenoceptor alpha 1D Source HGNC Symbol Acc HGNC 280
A08	UPFH0530454	ENST00000280155.3	ADRA2A	ENSG00000150594	adrenoceptor alpha 2A Source HGNC Symbol Acc HGNC 281
A09	UPFH0039456	ENST00000620793.2	ADRA2B	ENSG00000274286	adrenoceptor alpha 2B Source HGNC Symbol Acc HGNC 282
A10	UPFH0120413	ENST00000330055.6	ADRA2C	ENSG00000184160	adrenoceptor alpha 2C Source HGNC Symbol Acc HGNC 283
A11	UPFH0079569	ENST00000550143.5	AK1	ENSG00000106992	adenylate kinase 1 Source HGNC Symbol Acc HGNC 361
A12	UPFH0437574	ENST00000466029.1	AK2	ENSG00000004455	adenylate kinase 2 Source HGNC Symbol Acc HGNC 362
B01	UPFH0463062	ENST00000611749.4	AK3	ENSG00000147853	adenylate kinase 3 Source HGNC Symbol Acc HGNC 17376
B02	UPFH0453992	ENST00000555528.5	AKT1	ENSG00000142208	AKT serine/threonine kinase 1 Source HGNC Symbol Acc HGNC 391
B03	UPFH0246744	ENST00000441941.6	AKT2	ENSG00000105221	AKT serine/threonine kinase 2 Source HGNC Symbol Acc HGNC 392
B04	UPFH0198803	ENST00000336199.9	AKT3	ENSG00000117020	AKT serine/threonine kinase 3 Source HGNC Symbol Acc HGNC 393
B05	UPFH0090032	ENST00000395549.3	ATG13	ENSG00000175224	autophagy related 13 Source HGNC Symbol Acc HGNC 29091
B06	UPFH0110738	ENST00000258418.10	CAB39	ENSG00000135932	calcium binding protein 39 Source HGNC Symbol Acc HGNC 20292
B07	UPFH0334740	ENST00000348335.6	CAMKK1	ENSG00000004660	calcium/calmodulin dependent protein kinase kinase 1 Source HGNC Symbol Acc HGNC 1469
B08	UPFH0090390	ENST00000392474.6	CAMKK2	ENSG00000110931	calcium/calmodulin dependent protein kinase kinase 2 Source HGNC Symbol Acc HGNC 1470
B09	UPFH0496563	ENST00000348749.9	CHRNA1	ENSG00000138435	cholinergic receptor nicotinic alpha 1 subunit Source HGNC Symbol Acc HGNC 1955
B10	UPFH0164072	ENST00000570557.5	CHRNB1	ENSG00000170175	cholinergic receptor nicotinic beta 1 subunit Source HGNC Symbol Acc HGNC 1961
B11	UPFH0043897	ENST00000540367.5	CPT1A	ENSG00000110090	carnitine palmitoyltransferase 1A Source HGNC Symbol Acc HGNC 2328
B12	UPFH0183411	ENST00000395650.6	CPT1B	ENSG00000205560	carnitine palmitoyltransferase 1B Source HGNC Symbol Acc HGNC 2329
C01	UPFH0113137	ENST00000599023.5	CPT1C	ENSG00000169169	carnitine palmitoyltransferase 1C Source HGNC Symbol Acc HGNC 18540
C02	UPFH1132334	ENST00000636891.1	CPT2	ENSG00000157184	carnitine palmitoyltransferase 2 Source HGNC Symbol Acc HGNC 2330
C03	UPFH0306847	ENST00000368630.7	CRTC2	ENSG00000160741	CREB regulated transcription coactivator 2 Source HGNC Symbol Acc HGNC 27301
C04	UPFH1132336	ENST00000008527.10	CRY1	ENSG00000008405	cryptochrome circadian regulator 1 Source HGNC Symbol Acc HGNC 2384
C05	UPFH0166334	ENST00000563555.1	EEF2K	ENSG00000103319	eukaryotic elongation factor 2 kinase Source HGNC Symbol Acc HGNC 24615
C06	UPFH0096211	ENST00000520657.1	EIF4EBP1	ENSG00000187840	eukaryotic translation initiation factor 4E binding protein 1 Source HGNC Symbol Acc HGNC 3288
C07	UPFH0063561	ENST00000407627.7	ELAVL1	ENSG00000066044	ELAV like RNA binding protein 1 Source HGNC Symbol Acc HGNC 3312
C08	UPFH0422393	ENST00000635197.1	FASN	ENSG00000169710	fatty acid synthase Source HGNC Symbol Acc HGNC 3594
C09	UPFH0442611	ENST00000540898.1	FOXO3	ENSG00000118689	forkhead box O3 Source HGNC Symbol Acc HGNC 3821
C10	UPFH0048681	ENST00000348367.9	GPAM	ENSG00000119927	glycerol-3-phosphate acyltransferase, mitochondrial Source HGNC Symbol Acc HGNC 24865
		ENST00000482		ENSG00000	glycerol-3-phosphate acyltransferase 2, mitochondrial Source HGNC Symbol

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	UPFH0293740	704.1	GPAT2	186281	Acc HGNC 27168
C12	UPFH1132433	ENST00000323798.8	GYS1	ENSG00000104812	glycogen synthase 1 Source HGNC Symbol Acc HGNC 4706
D01	UPFH0433307	ENST00000261195.2	GYS2	ENSG00000111713	glycogen synthase 2 Source HGNC Symbol Acc HGNC 4707
D02	UPFH0368825	ENST00000343975.9	HMGCR	ENSG00000113161	3-hydroxy-3-methylglutaryl-CoA reductase Source HGNC Symbol Acc HGNC 5006
D03	UPFH0223088	ENST00000372920.1	HNF4A	ENSG00000101076	hepatocyte nuclear factor 4 alpha Source HGNC Symbol Acc HGNC 5024
D04	UPFH0483358	ENST00000598216.1	INSR	ENSG00000171105	insulin receptor Source HGNC Symbol Acc HGNC 6091
D05	UPFH0300038	ENST00000371060.7	LEPR	ENSG00000116678	leptin receptor Source HGNC Symbol Acc HGNC 6554
D06	UPFH0552904	ENST00000601189.1	LIPE	ENSG00000079435	lipase E, hormone sensitive type Source HGNC Symbol Acc HGNC 6621
D07	UPFH0608015	ENST00000262430.6	MLYCD	ENSG00000103150	malonyl-CoA decarboxylase Source HGNC Symbol Acc HGNC 7150
D08	UPFH1132560	ENST00000361445.8	MTOR	ENSG00000198793	mechanistic target of rapamycin kinase Source HGNC Symbol Acc HGNC 3942
D09	UPFH0104991	ENST00000389224.7	PDPK1	ENSG00000140992	3-phosphoinositide dependent protein kinase 1 Source HGNC Symbol Acc HGNC 8816
D10	UPFH0031582	ENST00000614686.1	PFKFB1	ENSG00000158571	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 1 Source HGNC Symbol Acc HGNC 8872
D11	UPFH0533488	ENST00000367079.3	PFKFB2	ENSG00000123836	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 2 Source HGNC Symbol Acc HGNC 8873
D12	UPFH0557316	ENST00000379785.5	PFKFB3	ENSG00000170525	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 3 Source HGNC Symbol Acc HGNC 8874
E01	UPFH0388427	ENST00000232375.8	PFKFB4	ENSG00000114268	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 4 Source HGNC Symbol Acc HGNC 8875
E02	UPFH0194238	ENST00000336615.9	PNPLA2	ENSG00000177666	patatin like phospholipase domain containing 2 Source HGNC Symbol Acc HGNC 30802
E03	UPFH0403608	ENST00000264867.7	PPARGC1A	ENSG00000109819	PPARG coactivator 1 alpha Source HGNC Symbol Acc HGNC 9237
E04	UPFH0004689	ENST00000394320.7	PPARGC1B	ENSG00000155846	PPARG coactivator 1 beta Source HGNC Symbol Acc HGNC 30022
E05	UPFH0120233	ENST00000522385.1	PPP2CA	ENSG00000113575	protein phosphatase 2 catalytic subunit alpha Source HGNC Symbol Acc HGNC 9299
E06	UPFH0548663	ENST00000221138.9	PPP2CB	ENSG00000104695	protein phosphatase 2 catalytic subunit beta Source HGNC Symbol Acc HGNC 9300
E07	UPFH0559678	ENST00000473455.2	PPP2R1A	ENSG00000105568	protein phosphatase 2 scaffold subunit Aalpha Source HGNC Symbol Acc HGNC 9302
E08	UPFH0521589	ENST00000531890.1	PPP2R1B	ENSG00000137713	protein phosphatase 2 scaffold subunit Abeta Source HGNC Symbol Acc HGNC 9303
E09	UPFH0007506	ENST00000336640.10	PPP2R2B	ENSG00000156475	protein phosphatase 2 regulatory subunit Bbeta Source HGNC Symbol Acc HGNC 9305
E10	UPFH0273368	ENST00000419582.5	PTPA	ENSG00000119383	protein phosphatase 2 phosphatase activator Source HGNC Symbol Acc HGNC 9308
E11	UPFH0363221	ENST00000397128.6	PRKAA1	ENSG00000132356	protein kinase AMP-activated catalytic subunit alpha 1 Source HGNC Symbol Acc HGNC 9376
E12	UPFH0310374	ENST00000610361.1	PRKAA2	ENSG00000162409	protein kinase AMP-activated catalytic subunit alpha 2 Source HGNC Symbol Acc HGNC 9377
F01	UPFH0062531	ENST00000545223.1	PRKAB1	ENSG00000111725	protein kinase AMP-activated non-catalytic subunit beta 1 Source HGNC Symbol Acc HGNC 9378
F02	UPFH0607399	ENST00000474939.1	PRKAB2	ENSG00000131791	protein kinase AMP-activated non-catalytic subunit beta 2 Source HGNC Symbol Acc HGNC 9379
F03	UPFH0332354	ENST00000593092.1	PRKACA	ENSG00000072062	protein kinase cAMP-activated catalytic subunit alpha Source HGNC Symbol Acc HGNC 9380
F04	UPFH0554579	ENST00000470673.5	PRKACB	ENSG00000142875	protein kinase cAMP-activated catalytic subunit beta Source HGNC Symbol Acc HGNC 9381
F05	UPFH0066787	ENST00000548065.6	PRKAG1	ENSG00000181929	protein kinase AMP-activated non-catalytic subunit gamma 1 Source HGNC Symbol Acc HGNC 9385
F06	UPFH0382293	ENST00000287878.9	PRKAG2	ENSG00000106617	protein kinase AMP-activated non-catalytic subunit gamma 2 Source HGNC Symbol Acc HGNC 9386
F07	UPFH0385179	ENST00000490971.1	PRKAG3	ENSG00000115592	protein kinase AMP-activated non-catalytic subunit gamma 3 Source HGNC Symbol Acc HGNC 9387
F08	UPFH0050183	ENST00000586397.5	PRKAR1A	ENSG00000108946	protein kinase cAMP-dependent type I regulatory subunit alpha Source HGNC Symbol Acc HGNC 9388
F09	UPFH0248599	ENST00000417852.5	PRKAR1B	ENSG00000188191	protein kinase cAMP-dependent type I regulatory subunit beta Source HGNC Symbol Acc HGNC 9390
F10	UPFH0265010	ENST00000454963.5	PRKAR2A	ENSG00000114302	protein kinase cAMP-dependent type II regulatory subunit alpha Source HGNC Symbol Acc HGNC 9391

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFH0532424	ENST00000488792.1	PRKAR2B	ENSG00000005249	protein kinase cAMP-dependent type II regulatory subunit beta Source HGNC Symbol Acc HGNC 9392
F12	UPFH0513408	ENST00000519912.1	RB1CC1	ENSG00000023287	RB1 inducible coiled-coil 1 Source HGNC Symbol Acc HGNC 15574
G01	UPFH1132665	ENST00000406116.7	RPS6KB1	ENSG00000108443	ribosomal protein S6 kinase B1 Source HGNC Symbol Acc HGNC 10436
G02	UPFH0358202	ENST00000312629.10	RPS6KB2	ENSG00000175634	ribosomal protein S6 kinase B2 Source HGNC Symbol Acc HGNC 10437
G03	UPFH0315022	ENST00000577161.5	RPTOR	ENSG00000141564	regulatory associated protein of MTOR complex 1 Source HGNC Symbol Acc HGNC 30287
G04	UPFH0163622	ENST00000317370.12	SLC2A4	ENSG00000181856	solute carrier family 2 member 4 Source HGNC Symbol Acc HGNC 11009
G05	UPFH0380685	ENST00000490796.1	SREBF1	ENSG00000072310	sterol regulatory element binding transcription factor 1 Source HGNC Symbol Acc HGNC 11289
G06	UPFH0426138	ENST00000586358.5	STK11	ENSG00000118046	serine/threonine kinase 11 Source HGNC Symbol Acc HGNC 11389
G07	UPFH0311729	ENST00000640183.1	STRADA	ENSG00000266173	STE20 related adaptor alpha Source HGNC Symbol Acc HGNC 30172
G08	UPFH0120726	ENST00000468123.1	STRADB	ENSG00000082146	STE20 related adaptor beta Source HGNC Symbol Acc HGNC 13205
G09	UPFH0565795	ENST00000269305.8	TP53	ENSG00000141510	tumor protein p53 Source HGNC Symbol Acc HGNC 11998
G10	UPFH0485358	ENST00000642745.1	TSC1	ENSG00000165699	TSC complex subunit 1 Source HGNC Symbol Acc HGNC 12362
G11	UPFH0065391	ENST00000643088.1	TSC2	ENSG00000103197	TSC complex subunit 2 Source HGNC Symbol Acc HGNC 12363
G12	UPFH1132747	ENST00000321867.6	ULK1	ENSG00000177169	unc-51 like autophagy activating kinase 1 Source HGNC Symbol Acc HGNC 12558
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 µl reactions: 20 µl 8x gDNA Removal Mix, 10 µl Reverse Transcription Enzyme, 40 µl Reverse Transcription Mix (containing RT primers), 20 µl Internal Control RNA, 1.9 ml RNase-Free Water	205410
QuantiNova Probe RT-PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml QuantiNova Probe RT-PCR Master Mix, 20 µl QuantiNova Probe RT Mix, 20 µl Internal Control RNA, 500 µl Yellow Template Dilution Buffer, 250 µl ROX Reference Dye, 1.9 µl RNase-Free Water	208352
QuantiNova Probe PCR Kit (100)*	For 100 x 20 µl reactions: 1 ml 2x QuantiNova Probe PCR Master Mix, 500 µl QuantiNova Yellow Template Dilution Buffer, 250 µl 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.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.