

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

## Mouse Epigenetic Chromatin Modification Enzymes

Cat. no. 249955 UPMM-085ZA

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	Ash1l	Aif2	Aurka	Aurkb	Aurkc	Carm1	Cdyl	Ctita	Kat14	Dnmt1	Dnmt3a	Dnmt3b
B	Dot1l	Dzip3	Ehmt1	Ehmt2	Esco1	Esco2	Haf1	Hdac1	Hdac10	Hdac11	Hdac2	Hdac3
C	Hdac4	Hdac5	Hdac6	Hdac7	Hdac8	Hdac9	Kat2a	Kat2b	Kat5	Kdm1a	Kdm4a	Kdm4c
D	Kdm5b	Kdm5c	Kdm6b	Kmt2c	Kmt2e	Mysm1	Kat8	Kat7	Kat6a	Kat6b	Ncoa1	Ncoa3
E	Ncoa6	Nek6	Nsd1	Pak1	Prmt1	Prmt2	Prmt3	Prmt5	Prmt6	Prmt7	Prmt8	Rnf2
F	Rnf20	Rps6ka3	Rps6ka5	Setd1a	Setd1b	Setd2	Setd3	Setd4	Setd5	Setd6	Setd7	Kmt5a
G	Setdb1	Setdb2	Smyd1	Smyd3	Suv39h1	Kmt5b	Ube2a	Ube2b	Usp16	Usp21	Usp22	Nsd2
H	Actb	B2m	Gapdh	Gusb	Hsp90ab1	MGDC	QIC	QIC	QIC	PPC	PPC	PPC

## Gene table: QuantiNova LNA Probe PCR Focus Panel

Position	Assay	Name	Symbol	Ensembl ID	Description
A01	UPFM080372 3	ENSMUST00000 090933.4	Ash1l	ENSMUSG00 000028053	ASH1 like histone lysine methyltransferase Source MGI Symbol Acc MGI 2183158
A02	UPFM100059 0	ENSMUST00000 154456.7	Ahf2	ENSMUSG00 000027104	activating transcription factor 2 Source MGI Symbol Acc MGI 109349
A03	UPFM069900 5	ENSMUST00000 109140.9	Aurka	ENSMUSG00 000027496	aurora kinase A Source MGI Symbol Acc MGI 894678
A04	UPFM068372 4	ENSMUST00000 149018.1	Aurkb	ENSMUSG00 000020897	aurora kinase B Source MGI Symbol Acc MGI 107168
A05	UPFM095948 4	ENSMUST00000 208518.1	Aurkc	ENSMUSG00 000070837	aurora kinase C Source MGI Symbol Acc MGI 1321119
A06	UPFM091197 0	ENSMUST00000 130032.7	Carm1	ENSMUSG00 000032185	coactivator-associated arginine methyltransferase 1 Source MGI Symbol Acc MGI 1913208
A07	UPFM081082 4	ENSMUST00000 075220.13	Cdyl	ENSMUSG00 000059288	chromodomain protein, Y chromosome-like Source MGI Symbol Acc MGI 1339956
A08	UPFM093080 6	ENSMUST00000 230146.1	Ciita	ENSMUSG00 000022504	class II transactivator Source MGI Symbol Acc MGI 108445
A09	UPFM084600 6	ENSMUST00000 147747.7	Kat14	ENSMUSG00 000027425	lysine acetyltransferase 14 Source MGI Symbol Acc MGI 1917264
A10	UPFM079807 4	ENSMUST00000 178110.2	Dnmt1	ENSMUSG00 000004099	DNA methyltransferase (cytosine-5) 1 Source MGI Symbol Acc MGI 94912
A11	UPFM082143 4	ENSMUST00000 174733.1	Dnmt3a	ENSMUSG00 000020661	DNA methyltransferase 3A Source MGI Symbol Acc MGI 1261827
A12	UPFM084213 8	ENSMUST00000 072997.9	Dnmt3b	ENSMUSG00 000027478	DNA methyltransferase 3B Source MGI Symbol Acc MGI 1261819
B01	UPFM085952 8	ENSMUST00000 127740.7	Dot1l	ENSMUSG00 000061589	DOT1-like, histone H3 methyltransferase ( <i>S. cerevisiae</i> ) Source MGI Symbol Acc MGI 2143886
B02	UPFM068483 5	ENSMUST00000 147358.7	Dzip3	ENSMUSG00 000064061	DAZ interacting protein 3, zinc finger Source MGI Symbol Acc MGI 1917433
B03	UPFM098925 9	ENSMUST00000 147147.7	Ehmt1	ENSMUSG00 000036893	euchromatic histone methyltransferase 1 Source MGI Symbol Acc MGI 1924933
B04	UPFM084868 1	ENSMUST00000 013931.11	Ehmt2	ENSMUSG00 000013787	euchromatic histone lysine N-methyltransferase 2 Source MGI Symbol Acc MGI 2148922
B05	UPFM086703 3	ENSMUST00000 234347.1	Esco1	ENSMUSG00 000024293	establishment of sister chromatid cohesion N-acetyltransferase 1 Source MGI Symbol Acc MGI 1925055
B06	UPFM096694 5	ENSMUST00000 022613.9	Esco2	ENSMUSG00 000022034	establishment of sister chromatid cohesion N-acetyltransferase 2 Source MGI Symbol Acc MGI 1919238
B07	UPFM090218 8	ENSMUST00000 145147.1	Hat1	ENSMUSG00 000027018	histone aminotransferase 1 Source MGI Symbol Acc MGI 96013
B08	UPFM093590 7	ENSMUST00000 125718.7	Hdac1	ENSMUSG00 000028800	histone deacetylase 1 Source MGI Symbol Acc MGI 108086
B09	UPFM063887 7	ENSMUST00000 128908.7	Hdac10	ENSMUSG00 000062906	histone deacetylase 10 Source MGI Symbol Acc MGI 2158340
B10	UPFM089990 5	ENSMUST00000 155007.1	Hdac11	ENSMUSG00 000034245	histone deacetylase 11 Source MGI Symbol Acc MGI 2385252
B11	UPFM081873 6	ENSMUST00000 019911.13	Hdac2	ENSMUSG00 000019777	histone deacetylase 2 Source MGI Symbol Acc MGI 1097691
B12	UPFM086072 7	ENSMUST00000 143660.7	Hdac3	ENSMUSG00 000024454	histone deacetylase 3 Source MGI Symbol Acc MGI 1343091
C01	UPFM071358 8	ENSMUST00000 097644.8	Hdac4	ENSMUSG00 000026313	histone deacetylase 4 Source MGI Symbol Acc MGI 3036234
C02	UPFM099963 6	ENSMUST00000 140481.1	Hdac5	ENSMUSG00 000008855	histone deacetylase 5 Source MGI Symbol Acc MGI 1333784
C03	UPFM084292 0	ENSMUST00000 154200.1	Hdac6	ENSMUSG00 000031161	histone deacetylase 6 Source MGI Symbol Acc MGI 1333752
C04	UPFM087303 0	ENSMUST00000 116408.8	Hdac7	ENSMUSG00 000022475	histone deacetylase 7 Source MGI Symbol Acc MGI 1891835
C05	UPFM074869 7	ENSMUST00000 137785.7	Hdac8	ENSMUSG00 000067567	histone deacetylase 8 Source MGI Symbol Acc MGI 1917565
C06	UPFM093260 2	ENSMUST00000 209750.1	Hdac9	ENSMUSG00 000004698	histone deacetylase 9 Source MGI Symbol Acc MGI 1931221
C07	UPFM074448 9	ENSMUST00000 103118.3	Kat2a	ENSMUSG00 000020918	K(lysine) acetyltransferase 2A Source MGI Symbol Acc MGI 1343101
C08	UPFM081295 8	ENSMUST00000 164390.1	Kat2b	ENSMUSG00 000000708	K(lysine) acetyltransferase 2B Source MGI Symbol Acc MGI 1343094
C09	UPFM095529 9	ENSMUST00000 235701.1	Kat5	ENSMUSG00 000024926	K(lysine) acetyltransferase 5 Source MGI Symbol Acc MGI 1932051
C10	UPFM067773 8	ENSMUST00000 171424.1	Kdm1a	ENSMUSG00 000036940	lysine (K)-specific demethylase 1A Source MGI Symbol Acc MGI 1196256
	UPFM064315	ENSMUST00000		ENSMUSG00	

Position	Assay	Name	Symbol	Ensembl ID	Description
C11	9	106406.8	Kdm4a	000033326	lysine (K)-specific demethylase 4A Source MGI Symbol Acc MGI 2446210
C12	UPFM100734 8	ENSMUST00000 156065.7	Kdm4c	ENSMUSG00 000028397	lysine (K)-specific demethylase 4C Source MGI Symbol Acc MGI 1924054
D01	UPFM096981 5	ENSMUST00000 112198.2	Kdm5b	ENSMUSG00 000042207	lysine (K)-specific demethylase 5B Source MGI Symbol Acc MGI 1922855
D02	UPFM093632 7	ENSMUST00000 112588.8	Kdm5c	ENSMUSG00 000025332	lysine (K)-specific demethylase 5C Source MGI Symbol Acc MGI 99781
D03	UPFM089087 6	ENSMUST00000 156562.1	Kdm6b	ENSMUSG00 000018476	KDM1 lysine (K)-specific demethylase 6B Source MGI Symbol Acc MGI 2448492
D04	UPFM069646 4	ENSMUST00000 172626.1	Kmt2c	ENSMUSG00 000038056	lysine (K)-specific methyltransferase 2C Source MGI Symbol Acc MGI 2444959
D05	UPFM078321 9	ENSMUST00000 196260.1	Kmt2e	ENSMUSG00 000029004	lysine (K)-specific methyltransferase 2E Source MGI Symbol Acc MGI 1924825
D06	UPFM082683 1	ENSMUST00000 149954.7	Mysm1	ENSMUSG00 000062627	myb-like, SWIRM and MPN domains 1 Source MGI Symbol Acc MGI 2444584
D07	UPFM067564 3	ENSMUST00000 205357.1	Kat8	ENSMUSG00 000030801	K(lysine) acetyltransferase 8 Source MGI Symbol Acc MGI 1915023
D08	UPFM088884 8	ENSMUST00000 072621.11	Kat7	ENSMUSG00 000038909	K(lysine) acetyltransferase 7 Source MGI Symbol Acc MGI 2182799
D09	UPFM064564 7	ENSMUST00000 130718.1	Kat6a	ENSMUSG00 000031540	K(lysine) acetyltransferase 6A Source MGI Symbol Acc MGI 2442415
D10	UPFM094456 3	ENSMUST00000 182405.8	Kat6b	ENSMUSG00 000021767	K(lysine) acetyltransferase 6B Source MGI Symbol Acc MGI 1858746
D11	UPFM088014 6	ENSMUST00000 217794.1	Ncoa1	ENSMUSG00 000020647	nuclear receptor coactivator 1 Source MGI Symbol Acc MGI 1276523
D12	UPFM096085 0	ENSMUST00000 139394.1	Ncoa3	ENSMUSG00 000027678	nuclear receptor coactivator 3 Source MGI Symbol Acc MGI 1276535
E01	UPFM095253 6	ENSMUST00000 123293.7	Ncoa6	ENSMUSG00 000038369	nuclear receptor coactivator 6 Source MGI Symbol Acc MGI 1929915
E02	UPFM076644 6	ENSMUST00000 112902.7	Nek6	ENSMUSG00 000026749	NIMA (never in mitosis gene a)-related expressed kinase 6 Source MGI Symbol Acc MGI 1891638
E03	UPFM074007 1	ENSMUST00000 224156.1	Nsd1	ENSMUSG00 000021488	nuclear receptor-binding SET-domain protein 1 Source MGI Symbol Acc MGI 1276545
E04	UPFM076380 8	ENSMUST00000 156637.2	Pak1	ENSMUSG00 000030774	p21 (RAC1) activated kinase 1 Source MGI Symbol Acc MGI 1339975
E05	UPFM097712 2	ENSMUST00000 207370.1	Prmt1	ENSMUSG00 000109324	protein arginine N-methyltransferase 1 Source MGI Symbol Acc MGI 107846
E06	UPFM101260 2	ENSMUST00000 099572.9	Prmt2	ENSMUSG00 000020230	protein arginine N-methyltransferase 2 Source MGI Symbol Acc MGI 1316652
E07	UPFM081831 9	ENSMUST00000 032715.12	Prmt3	ENSMUSG00 000030505	protein arginine N-methyltransferase 3 Source MGI Symbol Acc MGI 1919224
E08	UPFM088904 6	ENSMUST00000 132227.8	Prmt5	ENSMUSG00 000023110	protein arginine N-methyltransferase 5 Source MGI Symbol Acc MGI 1351645
E09	UPFM081591 8	ENSMUST00000 190378.1	Prmt6	ENSMUSG00 000049300	protein arginine N-methyltransferase 6 Source MGI Symbol Acc MGI 2139971
E10	UPFM066022 7	ENSMUST00000 128201.1	Prmt7	ENSMUSG00 000060098	protein arginine N-methyltransferase 7 Source MGI Symbol Acc MGI 2384879
E11	UPFM067247 9	ENSMUST00000 032500.8	Prmt8	ENSMUSG00 000030350	protein arginine N-methyltransferase 8 Source MGI Symbol Acc MGI 3043083
E12	UPFM093318 3	ENSMUST00000 186415.6	Rnf2	ENSMUSG00 000026484	ring finger protein 2 Source MGI Symbol Acc MGI 1101759
F01	UPFM066436 7	ENSMUST00000 132782.7	Rnf20	ENSMUSG00 000028309	ring finger protein 20 Source MGI Symbol Acc MGI 1925927
F02	UPFM082590 2	ENSMUST00000 112492.7	Rps6ka3	ENSMUSG00 000031309	ribosomal protein S6 kinase polypeptide 3 Source MGI Symbol Acc MGI 104557
F03	UPFM063925 4	ENSMUST00000 043599.6	Rps6ka5	ENSMUSG00 000021180	ribosomal protein S6 kinase, polypeptide 5 Source MGI Symbol Acc MGI 1920336
F04	UPFM091081 1	ENSMUST00000 126761.7	Setd1a	ENSMUSG00 000042308	SET domain containing 1A Source MGI Symbol Acc MGI 2446244
F05	UPFM080679 4	ENSMUST00000 174836.7	Setd1b	ENSMUSG00 000038384	SET domain containing 1B Source MGI Symbol Acc MGI 2652820
F06	UPFM088448 1	ENSMUST00000 198697.1	Setd2	ENSMUSG00 000044791	SET domain containing 2 Source MGI Symbol Acc MGI 1918177
F07	UPFM081051 2	ENSMUST00000 125210.1	Setd3	ENSMUSG00 000056770	SET domain containing 3 Source MGI Symbol Acc MGI 1289184
F08	UPFM062744 6	ENSMUST00000 233419.1	Setd4	ENSMUSG00 000022948	SET domain containing 4 Source MGI Symbol Acc MGI 2136890
F09	UPFM080694 2	ENSMUST00000 113157.7	Setd5	ENSMUSG00 000034269	SET domain containing 5 Source MGI Symbol Acc MGI 1920145
F10	UPFM090404 0	ENSMUST00000 148727.2	Setd6	ENSMUSG00 000031671	SET domain containing 6 Source MGI Symbol Acc MGI 1913333

Position	Assay	Name	Symbol	Ensembl ID	Description
F11	UPFM087443 8	ENSMUST00000 037141.8	Setd7	ENSMUSG00 000037111	SET domain containing (lysine methyltransferase) 7 Source MGI Symbol Acc MGI 1920501
F12	UPFM067045 1	ENSMUST00000 154031.7	Kmt5a	ENSMUSG00 000049327	lysine methyltransferase 5A Source MGI Symbol Acc MGI 1915206
G01	UPFM062450 3	ENSMUST00000 124638.7	Setdb1	ENSMUSG00 000015697	SET domain, bifurcated 1 Source MGI Symbol Acc MGI 1934229
G02	UPFM072376 6	ENSMUST00000 095775.9	Setdb2	ENSMUSG00 000071350	SET domain, bifurcated 2 Source MGI Symbol Acc MGI 2685139
G03	UPFM065112 4	ENSMUST00000 114186.8	Smyd1	ENSMUSG00 000055027	SET and MYND domain containing 1 Source MGI Symbol Acc MGI 104790
G04	UPFM085124 2	ENSMUST00000 128302.7	Smyd3	ENSMUSG00 000055067	SET and MYND domain containing 3 Source MGI Symbol Acc MGI 1916976
G05	UPFM070836 2	ENSMUST00000 127617.1	Suv39h1	ENSMUSG00 000039231	suppressor of variegation 3-9 1 Source MGI Symbol Acc MGI 1099440
G06	UPFM071926 8	ENSMUST00000 176407.7	Kmt5b	ENSMUSG00 000045098	lysine methyltransferase 5B Source MGI Symbol Acc MGI 2444557
G07	UPFM093287 4	ENSMUST00000 200835.3	Ube2a	ENSMUSG00 000016308	ubiquitin-conjugating enzyme E2A Source MGI Symbol Acc MGI 102959
G08	UPFM067437 0	ENSMUST00000 020657.12	Ube2b	ENSMUSG00 000020390	ubiquitin-conjugating enzyme E2B Source MGI Symbol Acc MGI 102944
G09	UPFM079093 6	ENSMUST00000 119504.7	Usp16	ENSMUSG00 000025616	ubiquitin specific peptidase 16 Source MGI Symbol Acc MGI 1921362
G10	UPFM098497 6	ENSMUST00000 111306.9	Usp21	ENSMUSG00 000053483	ubiquitin specific peptidase 21 Source MGI Symbol Acc MGI 1353665
G11	UPFM065224 9	ENSMUST00000 174220.1	Usp22	ENSMUSG00 000042506	ubiquitin specific peptidase 22 Source MGI Symbol Acc MGI 2144157
G12	UPFM084382 9	ENSMUST00000 139845.7	Nsd2	ENSMUSG00 000057406	nuclear receptor binding SET domain protein 2 Source MGI Symbol Acc MGI 1276574
H01	UPFM113294 6	ENSMUST00000 163829.1	Actb	ENSMUSG00 000029580	actin, beta Source MGI Symbol Acc MGI 87904
H02	UPFM113294 7	ENSMUST00000 102476.4	B2m	ENSMUSG00 000060802	beta-2 microglobulin Source MGI Symbol Acc MGI 88127
H03	UPFM113294 8	ENSMUST00000 117757.8	Gapdh	ENSMUSG00 000057666	glyceraldehyde-3-phosphate dehydrogenase Source MGI Symbol Acc MGI 95640
H04	UPFM113294 9	ENSMUST00000 026613.13	Gusb	ENSMUSG00 000025534	glucuronidase, beta Source MGI Symbol Acc MGI 95872
H05	UPFM113295 0	ENSMUST00000 166469.7	Hsp90ab1	ENSMUSG00 000023944	heat shock protein 90 alpha (cytosolic), class B member 1 Source MGI Symbol Acc MGI 96247
H06	UPFM112660 9	UPL_MGDC	MGDC	UPL_MGDC	Mouse 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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