

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

## Human Heat Shock Proteins & Chaperones

Cat. no. 249955 UPHS-076ZR

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](http://www.qiagen.com) for further details.

|   | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8        | 9        | 10      | 11      | 12      |
|---|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|---------|---------|
| A | COQ8A   | ATF6    | BAG1    | BAG2    | BAG3    | BAG4    | BAG5    | CCS      | CCT2     | CCT3    | CCT4    | CCT5    |
| B | CCT6A   | CCT6B   | CCT7    | CRYAA   | CRYAB   | DNAJA1  | DNAJA2  | DNAJA3   | DNAJA4   | DNAJB1  | DNAJB11 | DNAJB12 |
| C | DNAJB13 | DNAJB14 | DNAJB2  | DNAJB5  | DNAJB6  | DNAJB7  | DNAJB8  | DNAJB9   | DNAJC1   | DNAJC10 | DNAJC11 | DNAJC12 |
| D | DNAJC13 | DNAJC14 | DNAJC15 | DNAJC16 | DNAJC17 | DNAJC18 | DNAJC21 | DNAJC3   | DNAJC4   | DNAJC5  | DNAJC5B | DNAJC5G |
| E | DNAJC6  | DNAJC7  | DNAJC8  | DNAJC9  | HSF1    | HSF2    | HSF4    | HSP90AA1 | HSP90AB1 | HSP90B1 | HSPA14  | HSPA1A  |
| F | HSPA1B  | HSPA1L  | HSPA2   | HSPA4   | HSPA4L  | HSPA5   | HSPA6   | HSPA8    | HSPA9    | HSPB1   | HSPB2   | HSPB3   |
| G | HSPB6   | HSPB7   | HSPB8   | HSPD1   | HSPE1   | HSPH1   | PFDN1   | PFDN2    | SERPINH1 | SIL1    | TCP1    | TOR1A   |
| 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      | UPFH0357073 | ENST00000366777.4  | COQ8A   | ENSG00000163050 | coenzyme Q8A Source HGNC Symbol Acc HGNC 16812                                      |
| A02      | UPFH1132245 | ENST00000367942.4  | ATF6    | ENSG00000118217 | activating transcription factor 6 Source HGNC Symbol Acc HGNC 791                   |
| A03      | UPFH1132265 | ENST00000641048.1  | BAG1    | ENSG00000107262 | BCL2 associated athanogene 1 Source HGNC Symbol Acc HGNC 937                        |
| A04      | UPFH0010929 | ENST00000370693.5  | BAG2    | ENSG00000112208 | BCL2 associated athanogene 2 Source HGNC Symbol Acc HGNC 938                        |
| A05      | UPFH0352059 | ENST00000369085.7  | BAG3    | ENSG00000151929 | BCL2 associated athanogene 3 Source HGNC Symbol Acc HGNC 939                        |
| A06      | UPFH0609555 | ENST00000521311.1  | BAG4    | ENSG00000156735 | BCL2 associated athanogene 4 Source HGNC Symbol Acc HGNC 940                        |
| A07      | UPFH0236060 | ENST00000337322.4  | BAG5    | ENSG00000166170 | BCL2 associated athanogene 5 Source HGNC Symbol Acc HGNC 941                        |
| A08      | UPFH0186344 | ENST00000531990.1  | CCS     | ENSG00000173992 | copper chaperone for superoxide dismutase Source HGNC Symbol Acc HGNC 1613          |
| A09      | UPFH0394157 | ENST00000550010.5  | CCT2    | ENSG00000166226 | chaperonin containing TCP1 subunit 2 Source HGNC Symbol Acc HGNC 1615               |
| A10      | UPFH0551025 | ENST00000368259.6  | CCT3    | ENSG00000163468 | chaperonin containing TCP1 subunit 3 Source HGNC Symbol Acc HGNC 1616               |
| A11      | UPFH0540146 | ENST00000544079.2  | CCT4    | ENSG00000115484 | chaperonin containing TCP1 subunit 4 Source HGNC Symbol Acc HGNC 1617               |
| A12      | UPFH0226819 | ENST00000506600.1  | CCT5    | ENSG00000150753 | chaperonin containing TCP1 subunit 5 Source HGNC Symbol Acc HGNC 1618               |
| B01      | UPFH0614819 | ENST00000482776.1  | CCT6A   | ENSG00000146731 | chaperonin containing TCP1 subunit 6A Source HGNC Symbol Acc HGNC 1620              |
| B02      | UPFH0249814 | ENST00000421975.7  | CCT6B   | ENSG00000132141 | chaperonin containing TCP1 subunit 6B Source HGNC Symbol Acc HGNC 1621              |
| B03      | UPFH0445135 | ENST00000399032.2  | CCT7    | ENSG00000135624 | chaperonin containing TCP1 subunit 7 Source HGNC Symbol Acc HGNC 1622               |
| B04      | UPFH0600167 | ENST00000482775.1  | CRYAA   | ENSG00000160202 | crystallin alpha A Source HGNC Symbol Acc HGNC 2388                                 |
| B05      | UPFH0205096 | ENST00000527950.5  | CRYAB   | ENSG00000109846 | crystallin alpha B Source HGNC Symbol Acc HGNC 2389                                 |
| B06      | UPFH0149656 | ENST00000465677.1  | DNAJA1  | ENSG00000086061 | DnaJ heat shock protein family (Hsp40) member A1 Source HGNC Symbol Acc HGNC 5229   |
| B07      | UPFH0100785 | ENST00000317089.10 | DNAJA2  | ENSG00000069345 | DnaJ heat shock protein family (Hsp40) member A2 Source HGNC Symbol Acc HGNC 14884  |
| B08      | UPFH0450132 | ENST00000262375.11 | DNAJA3  | ENSG00000103423 | DnaJ heat shock protein family (Hsp40) member A3 Source HGNC Symbol Acc HGNC 11808  |
| B09      | UPFH0514383 | ENST00000394855.7  | DNAJA4  | ENSG00000140403 | DnaJ heat shock protein family (Hsp40) member A4 Source HGNC Symbol Acc HGNC 14885  |
| B10      | UPFH0089338 | ENST00000595992.5  | DNAJB1  | ENSG00000132002 | DnaJ heat shock protein family (Hsp40) member B1 Source HGNC Symbol Acc HGNC 5270   |
| B11      | UPFH0371628 | ENST00000265028.7  | DNAJB11 | ENSG00000090520 | DnaJ heat shock protein family (Hsp40) member B11 Source HGNC Symbol Acc HGNC 14889 |
| B12      | UPFH0119793 | ENST00000444643.7  | DNAJB12 | ENSG00000148719 | DnaJ heat shock protein family (Hsp40) member B12 Source HGNC Symbol Acc HGNC 14891 |
| C01      | UPFH0279519 | ENST00000339764.5  | DNAJB13 | ENSG00000187726 | DnaJ heat shock protein family (Hsp40) member B13 Source HGNC Symbol Acc HGNC 30718 |
| C02      | UPFH0521015 | ENST00000493110.1  | DNAJB14 | ENSG00000164031 | DnaJ heat shock protein family (Hsp40) member B14 Source HGNC Symbol Acc HGNC 25881 |
| C03      | UPFH1125221 | ENST00000442681.5  | DNAJB2  | ENSG00000135924 | DnaJ heat shock protein family (Hsp40) member B2 Source HGNC Symbol Acc HGNC 5228   |
| C04      | UPFH0161701 | ENST00000539059.1  | DNAJB5  | ENSG00000137094 | DnaJ heat shock protein family (Hsp40) member B5 Source HGNC Symbol Acc HGNC 14887  |
| C05      | UPFH0229595 | ENST00000486083.6  | DNAJB6  | ENSG00000105993 | DnaJ heat shock protein family (Hsp40) member B6 Source HGNC Symbol Acc HGNC 14888  |
| C06      | UPFH0050088 | ENST00000307221.4  | DNAJB7  | ENSG00000172404 | DnaJ heat shock protein family (Hsp40) member B7 Source HGNC Symbol Acc HGNC 24986  |
| C07      | UPFH0541596 | ENST00000319153.3  | DNAJB8  | ENSG00000179407 | DnaJ heat shock protein family (Hsp40) member B8 Source HGNC Symbol Acc HGNC 23699  |
| C08      | UPFH0227679 | ENST00000249356.4  | DNAJB9  | ENSG00000128590 | DnaJ heat shock protein family (Hsp40) member B9 Source HGNC Symbol Acc HGNC 6968   |
| C09      | UPFH0312013 | ENST00000447548.5  | DNAJC1  | ENSG00000136770 | DnaJ heat shock protein family (Hsp40) member C1 Source HGNC Symbol Acc HGNC 20090  |
| C10      | UPFH0339095 | ENST00000469118.5  | DNAJC10 | ENSG00000077232 | DnaJ heat shock protein family (Hsp40) member C10 Source HGNC Symbol Acc HGNC 24637 |
|          |             | ENST00000473       |         | ENSG000000      | DnaJ heat shock protein family (Hsp40) member C11 Source HGNC Symbol                |

| Position | Assay       | Name               | Symbol   | Ensembl ID      | Description                                                                              |
|----------|-------------|--------------------|----------|-----------------|------------------------------------------------------------------------------------------|
| C11      | UPFH0046981 | 993.5              | DNAJC11  | 007923          | Acc HGNC 25570                                                                           |
| C12      | UPFH0550777 | ENST00000480963.5  | DNAJC12  | ENSG00000108176 | DnaJ heat shock protein family (Hsp40) member C12 Source HGNC Symbol Acc HGNC 28908      |
| D01      | UPFH0494951 | ENST00000464766.1  | DNAJC13  | ENSG00000138246 | DnaJ heat shock protein family (Hsp40) member C13 Source HGNC Symbol Acc HGNC 30343      |
| D02      | UPFH0545219 | ENST00000357606.7  | DNAJC14  | ENSG00000135392 | DnaJ heat shock protein family (Hsp40) member C14 Source HGNC Symbol Acc HGNC 24581      |
| D03      | UPFH0169878 | ENST00000474320.1  | DNAJC15  | ENSG00000120675 | DnaJ heat shock protein family (Hsp40) member C15 Source HGNC Symbol Acc HGNC 20325      |
| D04      | UPFH1124802 | ENST00000375847.8  | DNAJC16  | ENSG00000116138 | DnaJ heat shock protein family (Hsp40) member C16 Source HGNC Symbol Acc HGNC 29157      |
| D05      | UPFH0525800 | ENST00000560645.5  | DNAJC17  | ENSG00000104129 | DnaJ heat shock protein family (Hsp40) member C17 Source HGNC Symbol Acc HGNC 25556      |
| D06      | UPFH0001688 | ENST00000505568.5  | DNAJC18  | ENSG00000170464 | DnaJ heat shock protein family (Hsp40) member C18 Source HGNC Symbol Acc HGNC 28429      |
| D07      | UPFH0334937 | ENST00000642285.1  | DNAJC21  | ENSG00000168724 | DnaJ heat shock protein family (Hsp40) member C21 Source HGNC Symbol Acc HGNC 27030      |
| D08      | UPFH1132364 | ENST00000602402.6  | DNAJC3   | ENSG00000102580 | DnaJ heat shock protein family (Hsp40) member C3 Source HGNC Symbol Acc HGNC 9439        |
| D09      | UPFH0368905 | ENST00000355040.8  | DNAJC4   | ENSG00000110011 | DnaJ heat shock protein family (Hsp40) member C4 Source HGNC Symbol Acc HGNC 5271        |
| D10      | UPFH0215707 | ENST00000470551.1  | DNAJC5   | ENSG00000101152 | DnaJ heat shock protein family (Hsp40) member C5 Source HGNC Symbol Acc HGNC 16235       |
| D11      | UPFH0230992 | ENST00000522619.1  | DNAJC5B  | ENSG00000147570 | DnaJ heat shock protein family (Hsp40) member C5 beta Source HGNC Symbol Acc HGNC 24138  |
| D12      | UPFH0403020 | ENST00000420191.5  | DNAJC5G  | ENSG00000163793 | DnaJ heat shock protein family (Hsp40) member C5 gamma Source HGNC Symbol Acc HGNC 24844 |
| E01      | UPFH0183593 | ENST00000395325.7  | DNAJC6   | ENSG00000116675 | DnaJ heat shock protein family (Hsp40) member C6 Source HGNC Symbol Acc HGNC 15469       |
| E02      | UPFH0429286 | ENST00000588641.5  | DNAJC7   | ENSG00000168259 | DnaJ heat shock protein family (Hsp40) member C7 Source HGNC Symbol Acc HGNC 12392       |
| E03      | UPFH0336678 | ENST00000489277.5  | DNAJC8   | ENSG00000126698 | DnaJ heat shock protein family (Hsp40) member C8 Source HGNC Symbol Acc HGNC 15470       |
| E04      | UPFH0568649 | ENST00000453189.2  | DNAJC9   | ENSG00000213551 | DnaJ heat shock protein family (Hsp40) member C9 Source HGNC Symbol Acc HGNC 19123       |
| E05      | UPFH0041314 | ENST00000528838.6  | HSF1     | ENSG00000185122 | heat shock transcription factor 1 Source HGNC Symbol Acc HGNC 5224                       |
| E06      | UPFH0077292 | ENST00000452194.5  | HSF2     | ENSG00000025156 | heat shock transcription factor 2 Source HGNC Symbol Acc HGNC 5225                       |
| E07      | UPFH0047432 | ENST00000519105.5  | HSF4     | ENSG00000102878 | heat shock transcription factor 4 Source HGNC Symbol Acc HGNC 5227                       |
| E08      | UPFH0292880 | ENST00000334701.11 | HSP90AA1 | ENSG00000080824 | heat shock protein 90 alpha family class A member 1 Source HGNC Symbol Acc HGNC 5253     |
| E09      | UPFH1132944 | ENST00000371554.2  | HSP90AB1 | ENSG00000096384 | heat shock protein 90 alpha family class B member 1 Source HGNC Symbol Acc HGNC 5258     |
| E10      | UPFH1132456 | ENST00000299767.10 | HSP90B1  | ENSG00000166598 | heat shock protein 90 beta family member 1 Source HGNC Symbol Acc HGNC 12028             |
| E11      | UPFH0357001 | ENST00000470430.1  | HSPA14   | ENSG00000187522 | heat shock protein family A (Hsp70) member 14 Source HGNC Symbol Acc HGNC 29526          |
| E12      | UPFH1126009 | ENST00000375651.6  | HSPA1A   | ENSG00000204389 | heat shock protein family A (Hsp70) member 1A Source HGNC Symbol Acc HGNC 5232           |
| F01      | UPFH0038526 | ENST00000375650.5  | HSPA1B   | ENSG00000204388 | heat shock protein family A (Hsp70) member 1B Source HGNC Symbol Acc HGNC 5233           |
| F02      | UPFH0163270 | ENST00000375654.5  | HSPA1L   | ENSG00000204390 | heat shock protein family A (Hsp70) member 1 like Source HGNC Symbol Acc HGNC 5234       |
| F03      | UPFH0516049 | ENST00000394709.2  | HSPA2    | ENSG00000126803 | heat shock protein family A (Hsp70) member 2 Source HGNC Symbol Acc HGNC 5235            |
| F04      | UPFH1132457 | ENST00000304858.7  | HSPA4    | ENSG00000170606 | heat shock protein family A (Hsp70) member 4 Source HGNC Symbol Acc HGNC 5237            |
| F05      | UPFH1132458 | ENST00000505726.1  | HSPA4L   | ENSG00000164070 | heat shock protein family A (Hsp70) member 4 like Source HGNC Symbol Acc HGNC 17041      |
| F06      | UPFH1132459 | ENST00000324460.7  | HSPA5    | ENSG00000044574 | heat shock protein family A (Hsp70) member 5 Source HGNC Symbol Acc HGNC 5238            |
| F07      | UPFH0124010 | ENST00000309758.6  | HSPA6    | ENSG00000173110 | heat shock protein family A (Hsp70) member 6 Source HGNC Symbol Acc HGNC 5239            |
| F08      | UPFH0509415 | ENST00000453788.6  | HSPA8    | ENSG00000109971 | heat shock protein family A (Hsp70) member 8 Source HGNC Symbol Acc HGNC 5241            |
| F09      | UPFH0218366 | ENST00000506477.5  | HSPA9    | ENSG00000113013 | heat shock protein family A (Hsp70) member 9 Source HGNC Symbol Acc HGNC 5244            |
| F10      | UPFH1139042 | ENST00000248553.7  | HSPB1    | ENSG00000106211 | heat shock protein family B (small) member 1 Source HGNC Symbol Acc HGNC 5246            |

| Position | Assay       | Name               | Symbol   | Ensembl ID      | Description                                                                     |
|----------|-------------|--------------------|----------|-----------------|---------------------------------------------------------------------------------|
| F11      | UPFH0393750 | ENST00000304298.4  | HSPB2    | ENSG00000170276 | heat shock protein family B (small) member 2 Source HGNC Symbol Acc HGNC 5247   |
| F12      | UPFH0022174 | ENST00000302005.3  | HSPB3    | ENSG00000169271 | heat shock protein family B (small) member 3 Source HGNC Symbol Acc HGNC 5248   |
| G01      | UPFH0163271 | ENST00000587965.1  | HSPB6    | ENSG00000004776 | heat shock protein family B (small) member 6 Source HGNC Symbol Acc HGNC 26511  |
| G02      | UPFH0525636 | ENST00000375718.4  | HSPB7    | ENSG00000173641 | heat shock protein family B (small) member 7 Source HGNC Symbol Acc HGNC 5249   |
| G03      | UPFH0474254 | ENST00000281938.6  | HSPB8    | ENSG00000152137 | heat shock protein family B (small) member 8 Source HGNC Symbol Acc HGNC 30171  |
| G04      | UPFH1132460 | ENST00000388968.8  | HSPD1    | ENSG00000144381 | heat shock protein family D (Hsp60) member 1 Source HGNC Symbol Acc HGNC 5261   |
| G05      | UPFH0442317 | ENST00000465573.1  | HSPE1    | ENSG00000115541 | heat shock protein family E (Hsp10) member 1 Source HGNC Symbol Acc HGNC 5269   |
| G06      | UPFH0572447 | ENST00000435381.5  | HSPH1    | ENSG00000120694 | heat shock protein family H (Hsp110) member 1 Source HGNC Symbol Acc HGNC 16969 |
| G07      | UPFH0152578 | ENST00000510217.1  | PFDN1    | ENSG00000113068 | prefoldin subunit 1 Source HGNC Symbol Acc HGNC 8866                            |
| G08      | UPFH0267668 | ENST00000368010.4  | PFDN2    | ENSG00000143256 | prefoldin subunit 2 Source HGNC Symbol Acc HGNC 8867                            |
| G09      | UPFH0251127 | ENST00000358171.7  | SERPINH1 | ENSG00000149257 | serpin family H member 1 Source HGNC Symbol Acc HGNC 1546                       |
| G10      | UPFH0421264 | ENST00000509534.5  | SIL1     | ENSG00000120725 | SIL1 nucleotide exchange factor Source HGNC Symbol Acc HGNC 24624               |
| G11      | UPFH0050568 | ENST00000392168.6  | TCP1     | ENSG00000120438 | t-complex 1 Source HGNC Symbol Acc HGNC 11655                                   |
| G12      | UPFH0518786 | ENST00000473604.2  | TOR1A    | ENSG00000136827 | torsin family 1 member A Source HGNC Symbol Acc HGNC 3098                       |
| 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 $\mu$ 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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