

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

## Rat Ubiquitination (Ubiquitylation)

Cat. no. 249955 UPRN-079ZR

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 | Anapc2  | Arlh1  | Atg7  | Bard1            | Brca1  | Brcc3              | Btrc             | Cbl                 | Cdc34   | Cul1   | Cul2               | Cul3    |
| B | Cul4b   | Cul5   | Ddb1  | Fbxo11           | Fbxo32 | Fbxo4              | Fbxo6            | Fbxw9               | Hecw2   | Itch   | March5             | Mdm2    |
| C | Mib1    | Mocs3  | Mul1  | Nae1             | Nedd8  | AABR0700151<br>9.1 | Cop1             | NEWGENE_15<br>59832 | Rnf144b | Rnf167 | Rnf180             | Rnf2    |
| D | Rnf20   | Rnf34  | Rnf40 | Rnf6             | Rnf8   | Soe1               | Skp1             | Skp2                | Smurf2  | Stub1  | Sym1               | Tmem189 |
| E | Tp53    | Uba1   | Uba3  | Uba5             | Uba6   | Ube2a              | LOC1036949<br>02 | Ube2c               | Ube2d1  | Ube2d3 | AABR0701704<br>6.1 | Ube2e3  |
| F | Ube2g1  | Ube2g2 | Ube2i | Ube2j1           | Ube2j2 | Ube2k              | Ube2l3           | Ube2l6              | Ube2m   | Ube2n  | Ube2q1             | Ube2q2  |
| G | Ube2q2l | Ube2s  | Ube2t | LOC1009126<br>18 | Ube2v2 | Ube2z              | Ube4a            | Uchl1               | Uchl3   | Uchl5  | Vhl                | Wwp1    |
| H | Aclb    | 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      | UPFR1100604 | ENSRNOT00000015099.7  | Anapc2          | ENSRNOG0000011295 | anaphase promoting complex subunit 2 Source RGD Symbol Acc 1305546                            |
| A02      | UPFR1031465 | ENSRNOT00000084758.1  | Arih1           | ENSRNOG0000009887 | ariadne RBR E3 ubiquitin protein ligase 1 Source RGD Symbol Acc 1308131                       |
| A03      | UPFR1095782 | ENSRNOT00000067532.2  | Atg7            | ENSRNOG0000007486 | autophagy related 7 Source RGD Symbol Acc 1304817                                             |
| A04      | UPFR1068418 | ENSRNOT00000087870.1  | Bard1           | ENSRNOG0000014960 | BRCA1 associated RING domain 1 Source RGD Symbol Acc 621072                                   |
| A05      | UPFR1018614 | ENSRNOT00000083111.1  | Brc1            | ENSRNOG0000020701 | BRCA1, DNA repair associated Source RGD Symbol Acc 2218                                       |
| A06      | UPFR1087279 | ENSRNOT00000071068.2  | Brcc3           | ENSRNOG0000048061 | BRCA1/BRCA2-containing complex, subunit 3 Source RGD Symbol Acc 1588543                       |
| A07      | UPFR1066655 | ENSRNOT00000022426.7  | Btrc            | ENSRNOG0000016280 | beta-transducin repeat containing E3 ubiquitin protein ligase Source RGD Symbol Acc 1359721   |
| A08      | UPFR1075129 | ENSRNOT00000067902.3  | Cbl             | ENSRNOG0000008444 | Cbl proto-oncogene Source RGD Symbol Acc 1561386                                              |
| A09      | UPFR1088961 | ENSRNOT00000088330.1  | Cdc34           | ENSRNOG0000060530 | cell division cycle 34 Source RGD Symbol Acc 1305411                                          |
| A10      | UPFR1049650 | ENSRNOT00000085805.1  | Cul1            | ENSRNOG0000005310 | cullin 1 Source RGD Symbol Acc 1308157                                                        |
| A11      | UPFR1119212 | ENSRNOT00000079607.1  | Cul2            | ENSRNOG0000015292 | cullin 2 Source RGD Symbol Acc 1310644                                                        |
| A12      | UPFR1106398 | ENSRNOT00000021528.7  | Cul3            | ENSRNOG0000015633 | cullin 3 Source RGD Symbol Acc 1308190                                                        |
| B01      | UPFR1045441 | ENSRNOT00000065023.2  | Cul4b           | ENSRNOG0000002585 | cullin 4B Source RGD Symbol Acc 1564494                                                       |
| B02      | UPFR1099389 | ENSRNOT00000010956.4  | Cul5            | ENSRNOG0000008039 | cullin 5 Source RGD Symbol Acc 621742                                                         |
| B03      | UPFR1086719 | ENSRNOT00000028188.7  | Ddb1            | ENSRNOG0000020715 | damage-specific DNA binding protein 1 Source RGD Symbol Acc 621889                            |
| B04      | UPFR1031684 | ENSRNOT00000021998.5  | Fbxo11          | ENSRNOG0000016396 | F-box protein 11 Source RGD Symbol Acc 727935                                                 |
| B05      | UPFR1082615 | ENSRNOT00000010361.3  | Fbxo32          | ENSRNOG0000006738 | F-box protein 32 Source RGD Symbol Acc 620373                                                 |
| B06      | UPFR1111037 | ENSRNOT00000020925.6  | Fbxo4           | ENSRNOG0000015622 | F-box protein 4 Source RGD Symbol Acc 1307580                                                 |
| B07      | UPFR1055477 | ENSRNOT00000012301.4  | Fbxo6           | ENSRNOG0000009217 | F-box protein 6 Source RGD Symbol Acc 620418                                                  |
| B08      | UPFR1079792 | ENSRNOT000000005581.5 | Fbxw9           | ENSRNOG0000004212 | F-box and WD repeat domain containing 9 Source RGD Symbol Acc 1307002                         |
| B09      | UPFR1066192 | ENSRNOT00000017761.5  | Hecw2           | ENSRNOG0000013257 | HECT, C2 and WW domain containing E3 ubiquitin protein ligase 2 Source RGD Symbol Acc 1593244 |
| B10      | UPFR1046313 | ENSRNOT00000078235.1  | Itch            | ENSRNOG0000059043 | itchy E3 ubiquitin protein ligase Source RGD Symbol Acc 1359556                               |
| B11      | UPFR1047745 | ENSRNOT00000023562.6  | March5          | ENSRNOG0000017396 | membrane associated ring-CH-type finger 5 Source RGD Symbol Acc 1305617                       |
| B12      | UPFR1073822 | ENSRNOT00000066767.2  | Mdm2            | ENSRNOG0000006304 | MDM2 proto-oncogene Source RGD Symbol Acc 1305332                                             |
| C01      | UPFR1126548 | ENSRNOT00000018025.6  | Mib1            | ENSRNOG0000013281 | mindbomb E3 ubiquitin protein ligase 1 Source RGD Symbol Acc 1307195                          |
| C02      | UPFR1107128 | ENSRNOT00000039403.5  | Mocs3           | ENSRNOG0000025067 | molybdenum cofactor synthesis 3 Source RGD Symbol Acc 1307044                                 |
| C03      | UPFR1102431 | ENSRNOT00000021833.7  | Mul1            | ENSRNOG0000016010 | mitochondrial E3 ubiquitin protein ligase 1 Source RGD Symbol Acc 1309944                     |
| C04      | UPFR1077326 | ENSRNOT00000076948.1  | Nae1            | ENSRNOG0000033133 | NEDD8 activating enzyme E1 subunit 1 Source RGD Symbol Acc 619945                             |
| C05      | UPFR1029668 | ENSRNOT00000064916.2  | Nedd8           | ENSRNOG0000019895 | neural precursor cell expressed, developmentally down-regulated 8 Source RGD Symbol Acc 3158  |
| C06      | UPFR1080845 | ENSRNOT00000086127.1  | AABR07001519.1  | ENSRNOG0000055547 |                                                                                               |
| C07      | UPFR1087603 | ENSRNOT00000040505.6  | Cop1            | ENSRNOG0000042492 | COP1, E3 ubiquitin ligase Source RGD Symbol Acc 1304773                                       |
| C08      | UPFR1049914 | ENSRNOT00000091325.1  | NEWGENE_1559832 | ENSRNOG0000002824 | ring finger protein, LIM domain interacting Source RGD Symbol Acc 11393862                    |
| C09      | UPFR1090581 | ENSRNOT00000082733.1  | Rnf144b         | ENSRNOG0000016123 | ring finger protein 144B Source RGD Symbol Acc 1308856                                        |
| C10      | UPFR1101808 | ENSRNOT00000005242.4  | Rnf167          | ENSRNOG0000003879 | ring finger protein 167 Source RGD Symbol Acc 1305972                                         |
|          |             | ENSRNOT000000         |                 | ENSRNOG00         |                                                                                               |

| Position | Assay       | Name                  | Symbol         | Ensembl ID         | Description                                                                 |
|----------|-------------|-----------------------|----------------|--------------------|-----------------------------------------------------------------------------|
| C11      | UPFR1111556 | 066069.3              | Rnf180         | 000043329          | ring finger protein 180 Source NCBI gene Acc 685384                         |
| C12      | UPFR1055293 | ENSRNOT00000092053.1  | Rnf2           | ENSRNOG0000002454  | ring finger protein 2 Source RGD Symbol Acc 1305491                         |
| D01      | UPFR1107585 | ENSRNOT00000059869.3  | Rnf20          | ENSRNOG0000006087  | ring finger protein 20 Source RGD Symbol Acc 1311936                        |
| D02      | UPFR1044351 | ENSRNOT00000001799.5  | Rnf34          | ENSRNOG0000001331  | ring finger protein 34 Source RGD Symbol Acc 628636                         |
| D03      | UPFR1041256 | ENSRNOT00000025499.2  | Rnf40          | ENSRNOG0000018840  | ring finger protein 40 Source RGD Symbol Acc 628638                         |
| D04      | UPFR1095402 | ENSRNOT00000092401.1  | Rnf6           | ENSRNOG0000000968  | ring finger protein 6 Source RGD Symbol Acc 1306092                         |
| D05      | UPFR1019737 | ENSRNOT00000081715.1  | Rnf8           | ENSRNOG0000047171  | ring finger protein 8 Source RGD Symbol Acc 1308035                         |
| D06      | UPFR1111258 | ENSRNOT00000020402.6  | Sae1           | ENSRNOG0000015128  | SUMO1 activating enzyme subunit 1 Source RGD Symbol Acc 1306098             |
| D07      | UPFR1117229 | ENSRNOT00000007676.7  | Skp1           | ENSRNOG0000005828  | S-phase kinase-associated protein 1 Source RGD Symbol Acc 1359648           |
| D08      | UPFR1041501 | ENSRNOT000000089178.1 | Skp2           | ENSRNOG00000059059 | S-phase kinase associated protein 2 Source RGD Symbol Acc 1562456           |
| D09      | UPFR1060690 | ENSRNOT00000019781.6  | Smurf2         | ENSRNOG0000014623  | SMAD specific E3 ubiquitin protein ligase 2 Source RGD Symbol Acc 1310067   |
| D10      | UPFR1091827 | ENSRNOT00000026921.6  | Stub1          | ENSRNOG0000019798  | STIP1 homology and U-box containing protein 1 Source RGD Symbol Acc 1306167 |
| D11      | UPFR1098645 | ENSRNOT00000028462.6  | Syvn1          | ENSRNOG0000020950  | synoviolin 1 Source RGD Symbol Acc 1310488                                  |
| D12      | UPFR1085391 | ENSRNOT00000090493.1  | Tmem189        | ENSRNOG0000060571  | transmembrane protein 189 Source RGD Symbol Acc 1309093                     |
| E01      | UPFR1095007 | ENSRNOT000000085115.1 | Tp53           | ENSRNOG0000010756  | tumor protein p53 Source RGD Symbol Acc 3889                                |
| E02      | UPFR1120795 | ENSRNOT000000031115.4 | Uba1           | ENSRNOG0000019164  | ubiquitin-like modifier activating enzyme 1 Source RGD Symbol Acc 1359327   |
| E03      | UPFR1020837 | ENSRNOT000000008893.7 | Uba3           | ENSRNOG0000006221  | ubiquitin-like modifier activating enzyme 3 Source RGD Symbol Acc 621084    |
| E04      | UPFR1117814 | ENSRNOT00000015240.5  | Uba5           | ENSRNOG0000011027  | ubiquitin-like modifier activating enzyme 5 Source RGD Symbol Acc 1311702   |
| E05      | UPFR1041319 | ENSRNOT000000037509.5 | Uba6           | ENSRNOG0000021931  | ubiquitin-like modifier activating enzyme 6 Source RGD Symbol Acc 1308324   |
| E06      | UPFR1089482 | ENSRNOT000000083861.2 | Ube2a          | ENSRNOG0000039985  | ubiquitin-conjugating enzyme E2A Source RGD Symbol Acc 1359534              |
| E07      | UPFR1081348 | ENSRNOT00000016742.7  | LOC103694902   | ENSRNOG0000005064  | ubiquitin-conjugating enzyme E2B Source RGD Symbol Acc 708345               |
| E08      | UPFR1067835 | ENSRNOT00000020323.3  | Ube2c          | ENSRNOG0000015131  | ubiquitin-conjugating enzyme E2C Source RGD Symbol Acc 1305382              |
| E09      | UPFR1042133 | ENSRNOT00000000750.7  | Ube2d1         | ENSRNOG0000000611  | ubiquitin-conjugating enzyme E2D 1 Source RGD Symbol Acc 1307886            |
| E10      | UPFR1109090 | ENSRNOT000000083181.1 | Ube2d3         | ENSRNOG0000013741  | ubiquitin-conjugating enzyme E2D 3 Source RGD Symbol Acc 619912             |
| E11      | UPFR1067075 | ENSRNOT000000046879.3 | AABR07017046.1 | ENSRNOG0000032690  | ubiquitin-conjugating enzyme E2E 2 Source NCBI gene Acc 361013              |
| E12      | UPFR1019992 | ENSRNOT000000006429.7 | Ube2e3         | ENSRNOG0000004544  | ubiquitin-conjugating enzyme E2E 3 Source RGD Symbol Acc 1308894            |
| F01      | UPFR1101034 | ENSRNOT00000013486.4  | Ube2g1         | ENSRNOG0000010041  | ubiquitin-conjugating enzyme E2G 1 Source RGD Symbol Acc 620392             |
| F02      | UPFR1102396 | ENSRNOT00000001636.7  | Ube2g2         | ENSRNOG0000001222  | ubiquitin-conjugating enzyme E2G 2 Source RGD Symbol Acc 1304860            |
| F03      | UPFR1022099 | ENSRNOT00000024406.6  | Ube2i          | ENSRNOG0000017907  | ubiquitin-conjugating enzyme E2I Source RGD Symbol Acc 3926                 |
| F04      | UPFR1073801 | ENSRNOT000000041271.5 | Ube2j1         | ENSRNOG0000007434  | ubiquitin-conjugating enzyme E2, J1 Source RGD Symbol Acc 1305067           |
| F05      | UPFR1095108 | ENSRNOT00000026752.7  | Ube2j2         | ENSRNOG0000019749  | ubiquitin-conjugating enzyme E2, J2 Source RGD Symbol Acc 1359523           |
| F06      | UPFR1077947 | ENSRNOT000000030485.5 | Ube2k          | ENSRNOG0000027088  | ubiquitin-conjugating enzyme E2K Source RGD Symbol Acc 1311626              |
| F07      | UPFR1017507 | ENSRNOT000000046159.4 | Ube2l3         | ENSRNOG0000001862  | ubiquitin-conjugating enzyme E2L 3 Source RGD Symbol Acc 1308361            |
| F08      | UPFR1053363 | ENSRNOT000000044319.4 | Ube2l6         | ENSRNOG0000030467  | ubiquitin-conjugating enzyme E2L 6 Source RGD Symbol Acc 1307960            |
| F09      | UPFR1014776 | ENSRNOT000000031007.6 | Ube2m          | ENSRNOG0000027514  | ubiquitin-conjugating enzyme E2M Source RGD Symbol Acc 1307614              |
| F10      | UPFR1074341 | ENSRNOT000000089874.1 | Ube2n          | ENSRNOG0000058053  | ubiquitin-conjugating enzyme E2N Source RGD Symbol Acc 621096               |

| Position | Assay       | Name                 | Symbol       | Ensembl ID         | Description                                                                         |
|----------|-------------|----------------------|--------------|--------------------|-------------------------------------------------------------------------------------|
| F11      | UPFR1091516 | ENSRNOT00000028210.5 | Ube2q1       | ENSRNOG00000020791 | ubiquitin conjugating enzyme E2 Q1 Source RGD Symbol Acc 1305305                    |
| F12      | UPFR1042957 | ENSRNOT00000019539.7 | Ube2q2       | ENSRNOG00000014529 | ubiquitin conjugating enzyme E2 Q2 Source NCBI gene Acc 363065                      |
| G01      | UPFR1108082 | ENSRNOT00000035153.3 | Ube2q2l      | ENSRNOG00000023261 | ubiquitin-conjugating enzyme E2Q family member 2-like Source RGD Symbol Acc 1563226 |
| G02      | UPFR1048317 | ENSRNOT00000022977.5 | Ube2s        | ENSRNOG00000016930 | ubiquitin-conjugating enzyme E2S Source RGD Symbol Acc 1564746                      |
| G03      | UPFR1061581 | ENSRNOT00000006747.4 | Ube2t        | ENSRNOG0000005038  | ubiquitin-conjugating enzyme E2T Source RGD Symbol Acc 1310816                      |
| G04      | UPFR1036700 | ENSRNOT00000035048.4 | LOC100912618 | ENSRNOG00000025580 | similar to ubiquitin-conjugating enzyme E2 variant 1 Source RGD Symbol Acc 1587144  |
| G05      | UPFR1030283 | ENSRNOT00000088212.1 | Ube2v2       | ENSRNOG00000001829 | ubiquitin conjugating enzyme E2 V2 Source RGD Symbol Acc 727838                     |
| G06      | UPFR1021215 | ENSRNOT00000055500.2 | Ube2z        | ENSRNOG0000006868  | ubiquitin-conjugating enzyme E2Z Source RGD Symbol Acc 1308347                      |
| G07      | UPFR1045755 | ENSRNOT00000021321.5 | Ube4a        | ENSRNOG00000026833 | ubiquitination factor E4A Source RGD Symbol Acc 1303173                             |
| G08      | UPFR1110967 | ENSRNOT00000003248.5 | Uchl1        | ENSRNOG0000002343  | ubiquitin C-terminal hydrolase L1 Source RGD Symbol Acc 3928                        |
| G09      | UPFR1077836 | ENSRNOT00000012842.6 | Uchl3        | ENSRNOG0000009530  | ubiquitin C-terminal hydrolase L3 Source RGD Symbol Acc 1561196                     |
| G10      | UPFR1046918 | ENSRNOT00000004881.6 | Uchl5        | ENSRNOG0000003545  | ubiquitin C-terminal hydrolase L5 Source RGD Symbol Acc 1305414                     |
| G11      | UPFR1031864 | ENSRNOT00000013727.3 | Vhl          | ENSRNOG00000010258 | von Hippel-Lindau tumor suppressor Source RGD Symbol Acc 3960                       |
| G12      | UPFR1085112 | ENSRNOT00000009047.5 | Wwp1         | ENSRNOG0000006328  | WW domain containing E3 ubiquitin protein ligase 1 Source RGD Symbol Acc 1311734    |
| H01      | UPFR1132952 | ENSRNOT00000080216.1 | Actb         | ENSRNOG00000034254 | actin, beta Source RGD Symbol Acc 628837                                            |
| H02      | UPFR1132953 | ENSRNOT00000023017.5 | B2m          | ENSRNOG00000017123 | beta-2 microglobulin Source RGD Symbol Acc 2189                                     |
| H03      | UPFR1132959 | ENSRNOT00000065935.3 | Hprt1        | ENSRNOG00000048561 | hypoxanthine phosphoribosyltransferase 1 Source RGD Symbol Acc 2826                 |
| H04      | UPFR1018740 | ENSRNOT00000017468.2 | Ldha         | ENSRNOG00000013009 | lactate dehydrogenase A Source RGD Symbol Acc 2996                                  |
| H05      | UPFR1132958 | ENSRNOT00000018820.5 | Rplp1        | ENSRNOG00000013874 | 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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