

BactoReal[®] Kits for detection of bacteria

| Product Name | Channel Pathogen | Channel IPC | Order Number |
|---|-------------------------|-------------------------|--------------|
| BactoReal[®] Kit <i>A. baumannii</i> & <i>P. mirabilis</i> (CE-IVD) Detection of the rpoB gene of <i>A. baumannii</i> and the ureC gene of <i>P. mirabilis</i> | FAM & VIC | Cy5 | DHUS00653 |
| BactoReal[®] Kit <i>Bartonella</i> spp. (RUO) Detection of the gltA gene of <i>B. clarridgeiae</i> , <i>B. elizabethae</i> , <i>B. grahamii</i> , <i>B. henselae</i> , <i>B. koehlerae</i> , <i>B. quintana</i> , <i>B. volans</i> and <i>B. washoensis</i> | FAM | Cy5 | DHUB03953 |
| BactoReal[®] Kit <i>Bordetella</i> Multiplex (CE-IVD) NEW Detection of the insertion sequence IS1001 of <i>B. paraptussis</i> , <i>B. bronchiseptica</i> and <i>B. holmesii</i> as well as detection of the insertion sequence IS481 of <i>B. pertussis</i> , <i>B. holmesii</i> and <i>B. bronchiseptica</i> | FAM & VIC | Cy5 | DHUB00453 |
| BactoReal[®] Kit <i>Borrelia burgdorferi</i> sensu lato (CE-IVD) Detection of the ospA gene of <i>Borrelia</i> species belonging to the <i>Borrelia burgdorferi</i> sensu lato complex | FAM | Cy5 | DHUB05053 |
| BactoReal[®] Kit <i>Brucella</i> spp. (RUO) Detection of the IS711 region of <i>B. abortus</i> , <i>B. ovis</i> , <i>B. melitensis</i> , <i>B. suis</i> and <i>B. canis</i> | FAM | Cy5 | DHUB02153 |
| BactoReal[®] Kit <i>Chlamydomphila pneumoniae</i> (RUO) Detection of the ompA gene of <i>C. pneumoniae</i> | FAM | Cy5 | DHUB00953 |
| BactoReal[®] Kit <i>Chlamydomphila psittaci/abortus</i> (RUO) Detection of the omp1 gene of <i>C. abortus</i> and <i>C. psittaci</i> | FAM | Cy5 | DHUB03053 |
| BactoReal[®] Kit <i>E. coli</i> & <i>Klebsiella</i> (CE-IVD) Detection of the dxs gene of <i>E. coli</i> and the khe gene of <i>K. pneumoniae</i> , <i>K. variicola</i> , <i>K. oxytoca</i> | FAM & VIC | Cy5 | DHUS00153 |
| BactoReal[®] Kit vanA & <i>Enterococcus</i> spp. (CE-IVD) Detection of the vanA gene and the 23S rRNA gene of <i>Enterococcus</i> spp. | FAM & VIC | Cy5 | DHUS00453 |
| BactoReal[®] Kit <i>P. aeruginosa</i> & <i>Enterobacter</i> spp. (CE-IVD) Detection of the 16S rRNA gene of <i>P. aeruginosa</i> and the rpoB gene of <i>Enterobacter</i> spp. | FAM & VIC | Cy5 | DHUS00553 |
| BactoReal[®] Kit <i>Haemophilus influenzae</i> (CE-IVD) Detection of the ompP6 gene of <i>H. influenzae</i> | FAM | Cy5 | DHUB01053 |
| BactoReal[®] Kit <i>H. pylori</i> ClariRes (CE-IVD) NEW Detection of the 23S rRNA gene of <i>H. pylori</i> and determination of its clarithromycin resistance | SYBR [®] Green | SYBR [®] Green | DHUB1000 |
| BactoReal[®] Kit <i>Legionella pneumophila</i> (CE-IVD) Detection of the 23S-5S rDNA intergenic spacer region of <i>L. pneumophila</i> | FAM | Cy5 | DHUB01153 |
| BactoReal[®] Kit <i>Leptospira</i> spp. (16S rDNA) (RUO) Detection of the 16S rRNA gene of pathogenic and intermediately pathogenic <i>Leptospira</i> species | VIC | Cy5 | DHUB00553 |
| BactoReal[®] Kit <i>Leptospira</i> spp. (LipL32) (RUO) Detection of the LipL32 gene of pathogenic <i>Leptospira</i> species | FAM | Cy5 | DHUB00653 |

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|--|------------------|-------------|--------------|
| BactoReal® Kit <i>Leptospira</i> spp. Multiplex (16S rDNA + LipL32) ^(RUO) Detection and differentiation of LipL32 and 16S rRNA gene of pathogenic and intermediately pathogenic <i>Leptospira</i> species | FAM & VIC | Cy5 | DHUB00753 |
| BactoReal® Kit <i>Listeria monocytogenes</i> ^(CE-IVD) Detection of the hlyA gene of <i>L. monocytogenes</i> | FAM | Cy5 | DHUB00853 |
| BactoReal® Kit <i>Mycoplasma pneumoniae</i> ^(CE-IVD) Detection of the 16S rRNA gene of <i>M. pneumoniae</i> | FAM | Cy5 | DHUB01253 |
| BactoReal® Kit <i>Neisseria meningitidis</i> ^(CE-IVD) Detection of the ctrA gene of <i>N. meningitidis</i> | FAM | Cy5 | DHUB00153 |
| BactoReal® Kit <i>Staphylococcus</i> spp. & <i>S. aureus</i> ^(CE-IVD) Detection of the 23S rRNA gene of <i>Staphylococcus</i> spp. and the nuc gene of <i>S. aureus</i> | FAM & VIC | Cy5 | DHUS00253 |
| BactoReal® Kit <i>Streptococcus agalactiae</i> ^(RUO) Detection of the cfb gene of <i>S. agalactiae</i> | FAM | Cy5 | DHUB01553 |
| BactoReal® Kit <i>S. pneumoniae</i> & <i>Streptococcus</i> spp. ^(CE-IVD) Detection of the lytA gene of <i>S. pneumoniae</i> and the 23S rRNA gene of <i>Streptococcus</i> spp. | FAM & VIC | Cy5 | DHUS00353 |
| BactoReal® Kit <i>Streptococcus pneumoniae</i> ^(CE-IVD) Detection of the lytA gene of <i>S. pneumoniae</i> | FAM | Cy5 | DHUB01453 |
| BactoReal® Kit <i>Tropheryma whipplei</i> ^(RUO) Detection of the groEL gene of <i>T. whipplei</i> | FAM | Cy5 | DHUB01653 |

CE-IVD: *in-vitro* diagnostic test

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ViroReal[®] Kits for detection of viruses

| Product Name | Channel Pathogen | Channel IPC | Order Number |
|---|------------------|-------------|---------------------------------------|
| ViroReal[®] Kit Adenovirus (CE-IVD) Detection of the hexon gene of human adenovirus species A-G | FAM | Cy5 | DHUV00153 |
| ViroReal[®] Kit Enterovirus (CE-IVD) Detection of RNA of the 5' UTR of enterovirus | FAM | Cy5 | DHUV00353 |
| ViroReal[®] Kit HDV (RUO) Detection of the 5'UTR of human hepatitis D virus | FAM | Cy5 | DHUV00953 |
| ViroReal[®] Kit HHV-6A, B (RUO) Detection of the U65/U66 gene of human herpes virus type 6 subtypes A and B | FAM | Cy5 | DHUV00653 |
| ViroReal[®] Kit HHV-7 (RUO) Detection of the glycoprotein H gene of human herpes virus type 7 | FAM | Cy5 | DHUV00753 |
| ViroReal[®] Kit Human Coronavirus alpha (RUO) Detection of RNA of the N gene of human coronavirus NL63 and 229E | FAM & VIC | Cy5 | DHUV01153 |
| ViroReal[®] Kit Human Coronavirus beta (RUO) Detection of RNA of the N gene of human coronavirus HKU1, OC43, MERS | FAM & VIC | Cy5 | DHUV01253 |
| ViroReal[®] Kit Influenza A/B (CE-IVD) NEW Detection of RNA of the matrix protein gene of influenza A virus as well as of the hemagglutinin gene of influenza B virus | FAM & VIC | Cy5 | DHUV00253 |
| ViroReal[®] Kit Metapneumovirus (CE-IVD) Detection of RNA of the nucleocapsid protein gene of hMPV A and hMPV B | FAM | Cy5 | DHUV01553 |
| ViroReal[®] Kit Parainfluenzavirus (CE-IVD) Detection of RNA of the HN gene of HPIV-1, HPIV-2, HPIV-3, HPIV-4 | FAM & VIC | Cy5 | DHUV01653 |
| ViroReal[®] Kit Parechovirus (RUO) Detection of RNA of the polyprotein gene of human parechovirus strains 1-6 | FAM | Cy5 | DHUV01753 |
| ViroReal[®] Kit Parvovirus B19 (RUO) Detection of the VP1 gene of parvovirus B19 genotypes 1, 2 and 3 | FAM | Cy5 | DHUV01853 |
| ViroReal[®] Kit Rhinovirus (A, B, C) (CE-IVD) Detection of RNA of the 5' UTR of human rhinovirus A, B and C | FAM | Cy5 | DHUV01953 |
| ViroReal[®] Kit Rotavirus (RUO) Detection of RNA of the NSP4 gene of rotavirus strains genotype A, most strains of genotype B, C and some strains of the other genotypes D-G | FAM | Cy5 | DHUV02053 |
| ViroReal[®] Kit RSV (A & B) (CE-IVD) Detection of RNA of the nucleocapsid protein gene of human respiratory syncytial virus subtypes A & B | FAM | Cy5 | DHUV02153 |
| ViroReal[®] Kit SARS-CoV2 & SARS (CE-IVD) Detection of RNA of the nucleocapsid protein gene of Sarbecovirus (coronavirus SARS-CoV-2, SARS-CoV and SARS-like CoV) | FAM | Cy5 | DHUV02353 DHUV02313 DHUV02313x5 |
| ViroReal[®] Kit SARS-CoV2 Multiplex (CE-IVD) Detection of RNA of the nucleocapsid protein (N) gene of Sarbecovirus inclusively SARS-CoV-2 and of RNA-dependent RNA polymerase (RdRp) gene of SARS-CoV-2 | FAM + VIC | Cy5 | DHUV02413 DHUV02413x5 |
| ViroReal[®] Kit SARS Coronavirus & Influenza A/B (CE-IVD) Detection of RNA of the nucleocapsid protein (N) gene of Sarbecovirus inclusively SARS-CoV-2, of RNA of the matrix protein gene of influenza A virus and of RNA of the hemagglutinin gene of influenza B virus | FAM + VIC | Cy5 | DHUV02513 DHUV02513x5 |
| ViroReal[®] Kit RT-LAMP SARS-CoV-2 (CE-IVD) Detection of RNA of the ORF1ab region of Sarbecovirus inclusively SARS-CoV-2 | FAM | Cy5 | DHUV02610 DHUV02610x5 |
| ViroReal[®] Kit VZV (RUO) Detection of the ORF29 of varicella zoster virus | FAM | Cy5 | DHUV02253 |

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MycoReal[®] Kits for detection of fungi

| Product Name | Channel Pathogen | Channel IPC | Order Number |
|--|------------------|-------------|--------------|
| MycoReal[®] Kit Aspergillus (CE-IVD) Detection and differentiation of the ITS2 region of <i>A. fumigatus</i> , <i>A. flavus</i> , <i>A. terreus</i> , <i>A. niger</i> and <i>A. nidulans</i> | FAM & VIC | Cy5 | DHUF00253 |
| MycoReal[®] Kit Candida & A. fumigatus (CE-IVD) Detection and differentiation of the ITS2 region of <i>C. albicans</i> , <i>C. tropicalis</i> , <i>C. dubliniensis</i> , <i>C. glabrata</i> , <i>C. krusei</i> and <i>C. parapsilosis</i> complex | FAM & VIC | Cy5 | DHUF00153 |
| MycoReal[®] Kit Pneumocystis (CE-IVD) NEW Detection of the mt LSU gene of <i>Pneumocystis jirovecii</i> | FAM | Cy5 | DHUF00353 |

CE-IVD: *in-vitro* diagnostic test

RUO: For research use only, not for diagnostic use

PanReal Kit for universal detection of fungi and bacteria

| Product Name | Channel Pathogen | Channel IPC | Order Number |
|---|------------------|-------------|--------------|
| PanReal Kit Fungi & Bacteria (RUO) Detection of the ITS2 region of fungi and the 16S rRNA gene of bacteria. Sequencing primer included. | FAM & VIC | Cy5 | DHUFB0153 |

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ParoReal Kits for detection of parasites

| Product Name | Channel Pathogen | Channel IPC | Order Number |
|--|------------------|-------------|--------------|
| ParoReal Kit Acanthamoeba T4 (CE-IVD) NEW Detection of the 18S rRNA gene of <i>Acanthamoeba</i> genotype T4 | FAM | Cy5 | DHUP00153 |

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FetoGnost[®] Kits for detection of human DNA

| Product Name | Channel Human Target | Channel IPC | Order Number |
|---|----------------------|-------------|------------------|
| FetoGnost[®] Kit RHD (CE-IVD) Detection of fetal DNA (rhesus factor D Exon 5, 7 and 10) from maternal plasma of non-immunized RhD negative women (non-invasive prenatal determination of fetal RHD status, NIPT-RHD) PCR-platform: ABI [®] 7500 instrument, QantStudio [™] 5/7 (Thermo Fisher Scientific) | FAM, VIC & NED | Cy5 | HUFG100, HUFG500 |
| FetoGnost[®] Kit Control (RUO) Detection of one maternal marker and two fetal markers for the detection of cell-free fetal DNA (cffDNA) in maternal plasma PCR-platform: ABI [®] 7500 instrument, QantStudio [™] 5/7 (Thermo Fisher Scientific) | FAM, VIC & NED | Cy5 | HUFG050 |

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General information on ingenetix kits

Kit contents:

- Assay (primer + probe) for detection of pathogen
- Assay (primer + probe) + IPC target for detection (Cy5 channel) of Internal Positive Control (IPC)
- Positive Control
- Reaction Mix
- Water

PCR-platforms:

developed for use with

- ABI® 7500 instrument (Thermo Fisher Scientific)
- QantStudio™ 5/7 (Thermo Fisher Scientific)
- LightCycler® 480 (Roche)
- Mx3005P® QPCR System (Agilent)

and designed for compatibility with **real-time PCR instruments** detecting and differentiating fluorescence in FAM and VIC or Cy5 channel except capillary systems

Kits are optimized to run under the same thermal cycling conditions

RNA and DNA material can be analysed in one PCR run

ingenetix Assays

| Product Name | Channel Pathogen | Order Number |
|--|------------------|------------------------|
| <i>H. pylori</i> ClariRes Assay ^(CE-IVD) Detection of the 23S rRNA gene of <i>H. pylori</i> and determination of its clarithromycin resistance. DNA Reaction Mix is not included (recommended: LC™-FastStart DNA Master SYBR® Green I) PCR-platform: Only LightCycler® 1.2/1.5/2.0 on basis of melting curve analysis | Cy5 | RTGM100 |
| BactoReal® <i>Leptospira</i> spp. (16S rDNA) ^(RUO) Detection of the 16S rRNA gene of pathogenic and intermediately pathogenic <i>Leptospira</i> species. DNA Reaction Mix is not included. | VIC | RTGM1700 |
| ViroReal® Assay Influenza A/B ^(CE-IVD) Detection of RNA of the matrix protein gene of influenza A virus and of RNA of the hemagglutinin gene of influenza B virus Only for use in combination with ViroReal® Kit SARS-CoV-2 & SARS | VIC | RTGM001RV RTGM002RV |

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Assays for detection of internal positive control

For use with ingenetix assays or customer assays

| Product Name | Channel | Order Number |
|---|------------------|--------------|
| ControlReal 1 ^(RUO) Detection of internal control DNA target (in assay mix). Recommended for Applied Biosystems® 7500, Mx3005P® | VIC | RTGMCR-1 |
| ControlReal 2 ^(RUO) Detection of internal control DNA target (in assay mix). Recommended for LightCycler® 1.2/1.5/2.0 | NED (F2, 610 nm) | RTGMCR-2 |
| ControlReal 3 ^(RUO) Detection of internal control DNA target (in assay mix). Recommended for Applied Biosystems® 7500, LightCycler® 480, Mx3005P® | Cy5 | RTGMCR-3 |
| Internal Positive Control Assay 1 ^(RUO) Detection of internal control DNA target (in extra tube). Recommended for Applied Biosystems® 7500, Mx3005P® | VIC | RTGMIPC-1 |
| Internal Positive Control Assay 2 ^(RUO) Detection of internal control DNA target (in extra tube). Recommended for LightCycler® 1.2/1.5/2.0 | NED (F2, 610 nm) | RTGMIPC-2 |
| Internal Positive Control Assay 3 ^(RUO) Detection of internal control DNA target (in extra tube). Recommended for Applied Biosystems® 7500, LightCycler® 480, Mx3005P® | Cy5 | RTGMIPC-3 |
| Internal Positive RNA Control Assay 1 ^(RUO) Detection of internal control RNA target (in extra tube). Recommended for Applied Biosystems® 7500, Mx3005P® | VIC | RTGMIPCR1 |
| Internal Positive RNA Control Assay 2 ^(RUO) Detection of internal control RNA target (in extra tube). Recommended for LightCycler® 1.2/1.5/2.0 | NED (F2, 610 nm) | RTGMIPCR2 |
| Internal Positive RNA Control Assay 3 ^(RUO) Detection of internal control RNA target (in extra tube). Recommended for Applied Biosystems® 7500, LightCycler® 480, Mx3005P® | Cy5 | RTGMIPCR3 |

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