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DNA testing

Vet & Agri
Molecular Diagnostics
Made easy

The genesig[®] q16


Primerdesign[®]





qPCR test kits
**Veterinary and
agricultural pathogen**

qPCR test kits Veterinary and agricultural pathogen

The veterinary and agriculture range is currently the fastest growing part of the genisig portfolio. qPCR based veterinary kits attract a lot of attention and this product ranges addresses some truly unique challenges in the field.

Avian

Bovine

Ovine/caprine

Equine

Feline

Canine

Piscean

Others

Avian

- Acinetobacter baumannii
- African Trypanosomiasis
- Aspergillus fumigatus
- Avian adenovirus (Egg Drop Syndrome)
- Avian Infectious Bronchitis Virus (IBV)
- Avian Influenza A Virus Subtype H5
- Avian Influenza A Virus Subtype H6
- Avian Influenza A Virus Subtype H7
- Avian Influenza A Virus Subtype H9
- Avian orthoreovirus
- Avian polyomavirus (Budgerigar Fledgling virus)
- Beak and Feather Disease Virus
- Blastocystis genus
- Burkholderia mallei
- Burkholderia pseudomallei
- Campylobacter Coli
- Campylobacter Jejuni
- Chicken anemia virus
- Chlamydomphila psittaci
- Columbidae Circovirus
- Columbidae herpesvirus 1
- Coxiella burnetii
- Cryptosporidium
- Duck Hepatitis B Virus
- Enterocytozoon bienzeusi
- Escherichia coli
- Escherichia coli O157:H7
- Fowlpox Virus
- Gallid herpesvirus 1
- Gallid herpesvirus 2
- H5N1
- H7N9
- Infectious Bursal Disease Virus (IBDV)
- Listeria monocytogenes
- Microsporium gypseum
- Mycobacterium avium
- Mycobacterium avium subspecies paratuberculosis
- Mycoplasma gallisepticum
- Newcastle disease virus
- Ornithobacterium rhinotracheale
- Pasteurella multocida
- Rift Valley Fever Virus
- Rotavirus A
- Rotavirus B
- Rotavirus C
- Salmonella enterica
- Salmonella species
- Shiga toxin producing Escherichia coli
- Tellurite resistant Escherichia coli

Bovine

- African Trypanosomiasis
- Anaplasma centrale
- Anaplasma marginale
- Anaplasma phagocytophilum
- Babesia bigemina
- Babesia bovis
- Babesia divergens
- Bacillus anthracis
- Blastocystis genus
- Bluetongue Virus
- Bluetongue Virus 1
- Bluetongue Virus 8
- Bovine adenovirus 3
- Bovine adenovirus 5/6/8
- Bovine herpesvirus 1
- Bovine Leukemia Virus
- Bovine parainfluenza virus 3
- Bovine parvovirus
- Bovine Respiratory Corona Virus
- Bovine Respiratory Syncytial Virus
- Bovine Viral Diarrhoea Virus
- Brucella abortus
- Campylobacter fetus
- Campylobacter fetus subspecies venerealis
- Campylobacter Jejuni
- Chlamydia
- Chlamydia abortus
- Chlamydia psittaci
- Corynebacterium pseudotuberculosis
- Coxiella burnetii
- Crimean-Congo Haemorrhagic Fever Virus
- Cryptosporidium
- Encephalitozoon species
- Enterocytozoon bieneusi
- Escherichia coli

- Escherichia coli 0157:H7
- Foot and Mouth Disease Virus
- Giardia intestinalis
- Leptospirosis
- Mycobacterium avium subspecies paratuberculosis
- Mycoplasma bovis
- Mycoplasma mycoides cluster
- Pasteurella multocida
- Rabies Virus
- Rhodococcus equi
- Rift Valley Fever Virus
- Rotavirus A
- Rotavirus B
- Rotavirus C
- Shiga toxin producing Escherichia coli
- Streptococcus agalactiae
- Tellurite resistant Escherichia coli
- Theileria annulata
- Theileria mutans
- Theileria parva
- Trichophyton mentagrophytes
- Tritrichomonas foetus
- Trypanosoma evansi
- Vesicular stomatitis virus
- Wesselsbron Virus

Ovine/caprine

- African African Trypanosomiasis
- Anaplasma marginale
- Anaplasma phagocytophilum
- Blastocystis genus
- Bluetongue Virus
- Bluetongue Virus 1
- Bluetongue Virus 8
- Campylobacter fetus
- Campylobacter fetus subspecies venerealis
- Capripoxvirus
- Chlamydia
- Clostridium tetani
- Corynebacterium pseudotuberculosis
- Coxiella burnetii
- Crimean-Congo Haemorrhagic Fever Virus
- Cryptosporidium
- Enterocytozoon bieneusi
- Escherichia coli
- Escherichia coli 0157:H7
- Foot and Mouth Disease Virus
- Leptospirosis
- Listeria monocytogenes
- Mycobacterium avium subspecies paratuberculosis
- Mycoplasma mycoides cluster
- Peste-des-petits-ruminants Virus
- Rhodococcus equi
- Rift Valley Fever Virus
- Rotavirus A, B & C
- Salmonella enterica
- Salmonella species
- Sheep Poxvirus
- Shiga toxin producing Escherichia coli
- Streptococcus agalactiae
- Tellurite resistant Escherichia coli
- Wesselsbron Virus

Equine

- African African Horse Sickness Virus
- African Trypanosomiasis
- Babesia caballi
- Blastocystis genus
- Chlamydomphila abortus
- Clostridium tetani
- Corynebacterium pseudotuberculosis
- Encephalitozoon species
- Enterocytozoon bienewsi
- Equid Herpesvirus 1
- Equid Herpesvirus 2
- Equid Herpesvirus 3
- Equid Herpesvirus 4
- Equid Herpesvirus 5
- Equine Arteritis Virus (EAV)
- Equine infectious anemia virus
- Foot and Mouth Disease Virus
- Lawsonia intracellularis
- Leptospirosis
- Mycoplasma arginini
- Rabies Virus
- Rhodococcus equi
- Rift Valley Fever Virus
- Rotavirus A
- Rotavirus b
- Streptococcus agalactiae
- Streptococcus equi subsp. Equi
- Strongylus vulgaris
- Taylorella equigenitalis
- Theileria equi
- Trypanosoma equiperdum
- Trypanosoma evansi
- Vesicular stomatitis virus
- Wesselsbron Virus

Feline

- African Trypanosomiasis
- Ancylostoma duodenale
- Bartonella henselae
- Blastocystis genus
- Bordetella bronchiseptica & Bordetella parapertussis
- Chlamydia
- Chlamydomphila felis
- Encephalitozoon species
- Enterocytozoon bienewsi
- Feline calicivirus
- Feline coronavirus
- Feline Herpesvirus
- Feline Immunodeficiency Virus
- Feline Leukemia Virus
- Geosmithia argillacea
- Giardia intestinalis
- Leptospirosis
- Microsporium gypseum
- Mycoplasma arginini
- Mycoplasma felis
- Mycoplasma haemofelis
- Pasteurella multocida
- Rotavirus A
- Rotavirus B
- Rotavirus C
- SARS coronavirus
- Streptococcus agalactiae
- Toxoplasma gondii
- Trichophyton mentagrophytes
- Tritrichomonas foetus

Canine

- African Trypanosomiasis
- Ancylostoma duodenale
- Aspergillus fumigatus
- Blastocystis genus
- Bordetella bronchiseptica & Bordetella parapertussis
- Canine Babesiosis
- Canine coronavirus
- Canine Distemper Virus
- Canine herpes virus
- Canine Norovirus
- Canine parainfluenza virus
- Carnivore protoparvovirus 1.
- Chlamydia
- Clostridium tetani
- Encephalitozoon species
- Enterocytozoon bienewsi
- Geosmithia argillacea
- Giardia intestinalis
- Leishmania infantum
- Leptospirosis
- Microsporium canis
- Microsporium gypseum
- Mycoplasma arginini
- Mycoplasma species haemofelis and haemocanis
- Neospora caninum
- Pasteurella multocida
- Rabies Virus
- Rotavirus A
- Rotavirus B
- Rotavirus C
- SARS coronavirus
- Streptococcus agalactiae
- Trichophyton mentagrophytes

Porcine

- African lumbricoides/ascaris suum.
- African Trypanosomiasis
- Blastocystis genus
- Campylobacter Jejuni
- Chlamydia
- Chlamydophila abortus
- Cryptosporidium
- Encephalitozoon species
- Enterocytozoon bienersi
- Escherichia coli
- Escherichia coli 0157:H7
- Lawsonia intracellularis
- Leptospirosis
- Mycoplasma arginini
- Mycoplasma hyopneumoniae
- Mycoplasma hyorhinis
- Mycoplasma suis
- Nitrobacter_spp
- Nitrospira species
- Nitrospira_spp
- Pasteurella multocida
- Porcine circovirus 1
- Porcine circovirus 2
- Porcine epidemic diarrhoea virus
- Porcine Reproductive and Respiratory Syndrome Virus
- Pseudomonas stutzeri
- Rhodococcus equi
- Rotavirus A
- Rotavirus B
- Rotavirus C
- Salmonella enterica
- Salmonella species
- Shiga toxin producing Escherichia coli
- Streptococcus agalactiae
- Tellurite resistant Escherichia coli
- Vesicular stomatitis virus
- Wesselsbron Virus

Piscean

- Aeromonas hydrophila
- Cyprinid herpesvirus 3
- Enterocytozoon bienersi
- Grass Carp Reovirus
- Infectious Hematopoietic Necrosis Virus
- Infectious Pancreatic Necrosis Virus
- Lymphocystivirus
- Mycobacterium marinum & Mycobacterium ulcerans
- Nodavirus
- Shewanella putrefaciens
- Spring Viremia of Carp Virus
- Viral Hemorrhagic Septicemia Virus

Others

- Achleplasma laidlawii
- Acute bee paralysis virus
- Aleutian Disease Virus
- Batrachochytrium dendrobatidis
- Botrytis cinerea
- Camel pox virus
- Clavibacter michiganensis sub species michiganensis
- Cryptococcus neoformans
- Cyclospora cayetanensis
- Dobrava-Belgrade virus
- Epizootic Hemorrhagic Disease Virus
- Francisella tularensis
- Israeli Acute Paralysis Virus
- Maize Dwarf Mosaic Virus
- Mycoplasma arginini
- Paenibacillus larvae
- Rhodococcus equi
- Slow bee paralysis virus
- Sudan Ebola Virus
- Sugarcane Mosaic Virus
- Tai Forest Ebola Virus
- Vesicular stomatitis virus
- Vesivirus2117
- Zaire ebola virus



The genesig[®] q16

What is the genesig q16?

The genesig q16 is a revolutionary instrument launched by Primerdesign Ltd. The instrument is designed to accompany the genesig product range which includes kits for over 400 different DNA testing applications. The q16 can test up to 16 samples at a time and is designed to make DNA testing affordable and easy for anyone in any business.

What can I use it for?

The genesig product range includes a huge range of tests for veterinary diagnostics.

Companion animals: Detect FIV in cats, CDV in dogs, Influenza in birds and much much more...

Farm animals: Screening for Foot and Mouth? Monitoring a Blue Tongue outbreak? All possible from the back of a Landover with the genesig q16.

Equine: Precise and affordable detection of sexually transmitted diseases, Taylorella equigenitalis, Klebsella and P. Aeruginosa.

What is DNA testing?

DNA testing is the most sensitive and precise way to detect and quantify the presence of a DNA target. The

underlying technology within the genesig q16 is real-time quantitative PCR. The technology has been around for 20 years, but to date has been complex and expensive to perform. The genesig q16 changes all that.

I don't have a laboratory. Can I use it?

Yes! If you don't have a laboratory it really doesn't matter. The instrument is designed to be used by anyone, anywhere. There is no complex programming or data analysis required. All of that is taken care of by our clever software. All you get is the answers to the questions you ask.

Alongside the instrument we can also supply you a complete 'lab-in-a-box' containing the few simple tools that you need to do your own DNA testing.

Is everything completely automated?

No. You will need to follow some very simple steps to extract the DNA from your sample. Then put it in to a tube and on to the q16. It's easy. And we'll provide incredibly simple instructions to guide you through your first experience.

The genesig[®] easy kit range



What is a genesig easy kit?

genesig is a catalogue of DNA testing kits for a range of applications in veterinary diagnostic testing. The kits come in 3 formats: advanced, standard and easy. The genesig easy kit range is the simplest to use version and is designed specifically for use on the genesig q16 instrument.

What is in the kit?

The kit contains all of the components required to run a DNA test. The kit is freeze-dried so that it can be shipped at room temperature. To use it you simply rehydrate the kit components, mix them and combine with your DNA, before placing into the genesig q16 and starting the automated analysis. (DNA extraction solutions supplied separately)



The genesig[®] easy DNA/RNA Extraction Kit

Easy extraction from virtually any sample type

The genesig easy DNA/RNA extraction protocol begins with a simple lysis step where cells and tissue are lysed to release their nucleic acid. Then minute magnetic particles are added to bind to RNA/DNA. When placed on to the genesig magnetic separator the particles are pulled to the side of the tube making it easy to remove the unwanted supernatant with a pipette. Then a series of simple wash steps are performed before the DNA/RNA is washed off the beads back in to solution, ready for analysis by real-time PCR.

Its fast, and incredibly easy to perform.

Suitable sample types

- Whole blood
- Serum
- Plasma
- Saliva
- Sputum
- Faeces
- Urine
- Tissue
- Bacterial culture
- More...



The genesig[®] Lab-in-a-box

Create a lab for anyone, anywhere

Even if you've never performed a DNA test in your life, the genesig q16 makes it affordable and easy to do. If you've never done this kind of testing then you probably don't have a laboratory. That's fine, as our Lab-in-a-box provides all of the simple tools that you'll need to get started.

- A genesig magnetic rack for DNA/RNA extraction
- Fixed volume, colour-coded pipettes for simple liquid handling
- Disposable tips for the pipettes
- Tube racks to hold everything in place whilst you work
- Digital laboratory timer





The genesig[®] q16 Technical Specifications

The q16 is a closed system designed to provide an incredibly simple user experience with fully automated data calling. It will not operate successfully with kits other than the genesig easy kit range.

- 16 Wells
 - 20ul reaction volume
- Peltier thermal control
 - 3°C/s heating
 - 2°C/s cooling
 - Thermal uniformity +/- 0.1°C range
 - Thermal accuracy +/- 0.25°C
- LED excitation
- CMOS detection
 - Multiplex detection of target and internal control via FAM and VIC channels
- 160mm Height
- 120mm Diameter
- 2kg weight
- 90W power consumption
- No moving parts
- Silent operation
- Operate from PC, Mac, via network, or stand alone with a USB drive
- Extraordinary well-to-well reproducibility



genesig kits are sold for general laboratory and research use only. Please feel free to contact us for free advice or technical support.


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