

# Livestock Diagnostics

Immuno and molecular reagents designed for developing diagnostic tests to monitor the health of herd, flock and aquatic animals.



CATTLE



SWINE



POULTRY

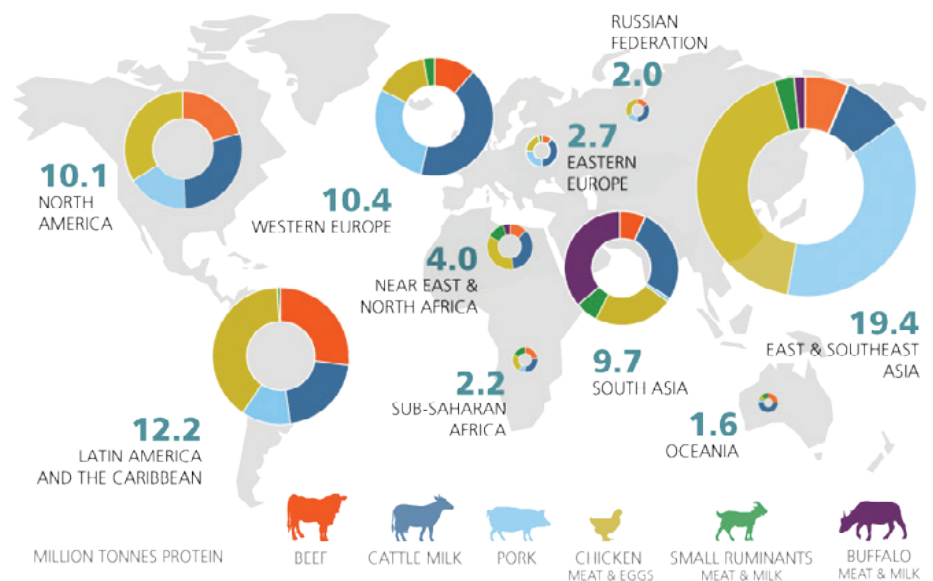


PRAWNS & FISH

Monitoring animal health and preventing animal disease outbreaks is vital to the economy and safety of the food supply. Diagnostics tests for livestock and aquatic animals include both molecular and immunoassay formats.

Meridian Life Science offers a specialized portfolio of antigens and antibodies for diseases routinely tested in livestock animals by ELISA methods. In addition, Meridian has a broad range of molecular reagents for developing molecular assays that can detect viruses, bacteria and fungi. Specialized master mix formulations are available that provide ready-to-use solutions for multiplex testing, detecting viruses as very low copy number or for overcoming PCR inhibition to generate reliable results.

## Global livestock production by region



Meat production in protein basis was calculated by using data on dressing percentages, carcass to bone-free meat and average bone-free meat protein content. Milk from all species was converted into fat and protein corrected milk. Eggs production is also expressed in protein terms. Global Livestock Environmental Assessment Model (GLEAM), [www.fao.org/gleam/results/en/](http://www.fao.org/gleam/results/en/)

# Antigens & Antibodies

| DESCRIPTION | TYPE | APPLICATION | CAT # |
|-------------|------|-------------|-------|
|-------------|------|-------------|-------|



| <b>Coronavirus, Bovine</b>                            |            |                  |         |
|---|------------|------------------|---------|
| Surface Antigen (Peplomer)                            | MAB        | ELISA, HIA       | C86540M |
| <b>Cryptosporidium, Bovine</b>                        |            |                  |         |
| Intact Oocysts  | PAb (Goat) | ELISA, IFA       | B65651G |
| <b>Nebraska Calf Diarrhea Virus (NCDV, Rotavirus)</b> |            |                  |         |
| NCDV p43 (vp6)  | MAB        | ELISA            | C11222M |
| NCDV (ICPs)   | PAb (Goat) | IFA              | B65110G |
| NCDV (ICPs)   | PAb (Goat) | ICC              | B65213G |
| NCDV (ICPs)   | PAb (Goat) | IFA              | B65211G |
| NCDV (ICPs)   | PAb (Goat) | IFA              | B65212G |
| <b>Trichomonas foetus</b>                             |            |                  |         |
| <i>T. foetus</i>                                      | MAB        | ELISA, IFA, pair | C01573M |
| <i>T. foetus</i>                                      | MAB        | ELISA, IFA, pair | C01572M |



| <b>African Swine Fever Virus (ASFV)</b>          |           |                         |         |
|--|-----------|-------------------------|---------|
| p30 Protein                                      | MAB       | ELISA, IFA, IHC, IP, WB | C01881M |
| p30 Protein                                      | MAB       | ELISA, IFA, IHC, IP, WB | C01882M |
| <b>Nipah Virus (NiV)</b>                         |           |                         |         |
| G Protein  | MAB       | ELISA, pair             | C01974M |
| G Protein  | MAB       | ELISA, pair             | C01975M |
| G Protein (Malaysia strain)                      | Ag (Rec.) | ELISA, pair             | R01766  |
| <b>Porcine Epidemic Diarrhea Virus (PEDV)</b>    |           |                         |         |
| PEDV   | MAB       | ELISA, LF, WB, pair     | C02005M |
| PEDV   | MAB       | ELISA, LF, WB, pair     | C02006M |
| Nucleoprotein                                    | Ag (Rec.) | ELISA, LF, WB           | R01778  |
| <b>Transmissible Gastroenteritis Virus (TGV)</b> |           |                         |         |
| Peplomer Protein                                 | MAB       | ELISA, Neut             | C55802M |
| Peplomer Protein                                 | MAB       | ELISA                   | C55803M |

| DESCRIPTION | TYPE | APPLICATION | CAT # |
|-------------|------|-------------|-------|
|-------------|------|-------------|-------|



| <b>Infectious Bronchitis Virus (IBV)</b> |     |                      |         |
|--|-----|----------------------|---------|
| Nucleoprotein                            | MAB | ELISA, WB            | C01530M |
| <b>Infectious Bursal Disease (IBDV)</b>  |     |                      |         |
| VP2 Protein                              | MAB | ELISA, WB, pair      | C01524M |
| VP2 Protein                              | MAB | ELISA, WB, pair      | C01526M |
| VP3 Protein                              | MAB | ELISA, WB, IHC, pair | C01525M |
| VP3 Protein                              | MAB | ELISA, WB, IHC, pair | C01528M |
| <b>Influenza A H5 (H1H5)</b>             |     |                      |         |
| Hemagglutinin H5                         | MAB | ELISA, DB, HIA, pair | C86240M |
| Hemagglutinin H5                         | MAB | ELISA, pair          | C01309M |
| <b>Influenza A H7 (H1H7)</b>             |     |                      |         |
| Hemagglutinin H7                         | MAB | ELISA, WB            | C01610M |
| Hemagglutinin H7                         | MAB | ELISA, WB            | C01611M |
| <b>Marek Disease Virus</b>               |     |                      |         |
| Serotypes 1, 2 & 3                       | MAB | ELISA                | C01264M |
| Serotypes 1, 2 & 3                       | MAB | ELISA                | C01267M |
| Serotypes 1, 2 & 3                       | MAB | ELISA                | C01268M |
| <b>Newcastle Disease Virus (NVD)</b>     |     |                      |         |
| HN Glycoprotein                          | MAB | ELISA, HIA           | C86012M |
| HN Glycoprotein                          | MAB | ELISA, HIA           | C86014M |
| HN Glycoprotein                          | MAB | ELISA, HIA, WB       | C86015M |
| HN Glycoprotein                          | MAB | ELISA, HIA, WB       | C86016M |
| HN Glycoprotein                          | MAB | ELISA, HIA           | C01351M |
| HN Glycoprotein                          | MAB | ELISA                | C01352M |
| Ribonucleoprotein                        | MAB | ELISA, IFA, IHC      | C01629M |

## Pairs

|   | CAPTURE ANTIBODY | DETECTION ANTIBODY | ANTIGEN |
|---|------------------|--------------------|---------|
| <i>Trichomonas foetus</i>                     | C01573M          | C01572M            |         |
| <b>Nipah Virus</b>                            | C01573M          | C01572M            | R01766  |
| <b>Porcine Epidemic Diarrhea Virus (PEDV)</b> | C01573M          | C01572M            | R01778  |
| <b>Influenza H1H5</b>                         | C01309M          | C86240M            |         |
| <b>Infectious Bursal Disease (IBDV)</b>       | C01524M          | C01526M            |         |
|   | C01525M          | C01528M            |         |

# Molecular Reagents

## Optimized Master Mixes

### **MDX030** *Low DNA qPCR Mix*

Designed for multiplex assays detecting microbial or fungal DNA. Incorporates a heat-activated DNA polymerase with low residual DNA content.

### **MDX020** *Fast qPCR Mix*

Ideal for multiplex assays requiring sensitive detection of DNA targets in inhibitor-rich samples. Contains an antibody-mediated hot-start polymerase.

### **MDX032** *Fast 1-Step RT-qPCR Mix*

Ideal for multiplex assays requiring sensitive detection of DNA and RNA targets. Contains an antibody-mediated hot-start polymerase, MMLV-RT and separate RNase inhibitor.

### **MDX025** *Low LOD 1-Step RT-qPCR Mix*

Designed for multiplex assays with highly-sensitive amplification of both RNA and DNA at very low levels. Incorporates an optimized dNTP/dUTP mix, and separate reverse transcriptase/RNase inhibitor mix.

### **MDX013** *Inhibitor-Tolerant qPCR Mix*

Designed for amplification direct from crude lysates or inhibitor-rich samples such as urine, cerebral spinal fluid (CSF), blood as well as plants. Contains an antibody-mediated hot-start polymerase.

### **MDX021** *Lyo-Ready qPCR Mix*

Ready-to-use, glycerol-free qPCR master mix formulated with a specialized blend of excipients for lyophilization into beads or pellets.

### **MDX024** *Lyo-Ready 1-Step RT-qPCR Mix*

Ready-to-use, glycerol-free RT-qPCR master mix formulated with a specialized blend of excipients for lyophilization into beads or pellets.

### **MDX062** *Lyo-Ready 1-Step RT-qPCR Virus Mix*

Ready-to-use, glycerol-free RT-qPCR master mix formulated with a specialized blend of excipients and highly suited for amplification of RNA viruses with a high secondary structure.

## Enzymes

### POLYMERASES

#### **MDX011** *Glycerol-Free Taq HS 50 U/μL*

Lyophilization-compatible, high concentration (50 U/μL), glycerol free DNA enzyme for automated high-throughput testing (provided as separate antibody, enzyme and dilution buffer).

#### **MDX009** *Low DNA Taq HS 5 U/μL*

Heat-activated, thermostable DNA polymerase with low residual DNA content. Ideal for multiplex assays involving amplification of bacterial and fungal DNA.

#### **MDX010** *Low DNA Taq HS 10 U/μL*

Heat-activated, thermostable DNA polymerase with low residual DNA content. Ideal for multiplex assays involving amplification of bacterial and fungal DNA.

#### **MDX001** *Taq DNA Polymerase*

DNA polymerase with optimized buffer system for fast PCR reactions across a range of templates.

#### **MDX008** *Taq DNA HS Polymerase*

Antibody-mediated hot-start DNA polymerase that is ideal for developing multiplex assays requiring sensitive detection of DNA targets in inhibitor-rich samples.

### REVERSE TRANSCRIPTASES

#### **MDX044** *MMLV-RT*

MMLV-RT suitable for generating first strand cDNA of up to 9 kb. Suitable for multiplex reactions.

#### **MDX043** *RNase-Tolerant MMLV-RT*

Mixture of MMLV-RT and RNase inhibitor that maintains activity up to 50° C. Suitable for detecting very low levels of RNA in inhibitor-rich samples.

## Companion Reagents

#### **MDX004** *Tissue Extract-PCR Buffers*

Lysis and neutralization buffers optimized for use with *Taq HS DNA Polymerase (MDX008)* to perform PCR direct from crude lysate.

#### **MDX033** *Fast qPCR Buffer, 4x*

Optimized for use with *Taq HS DNA Polymerase (MDX008)*.

#### **MDX034** *1-Step RT-qPCR Buffer, 4x*

Optimized for use with *Taq HS DNA Polymerase (MDX008)* and *RNase-Tolerant MMLV-RT (MDX043)*.

#### **MDX056** *RNase Inhibitor*

Inhibits a broad spectrum of eukaryotic RNases, including RNases A, B and C to control for contaminants in RT-PCR assays.

#### **MDX014** *Taq HS Antibody*

A mix of anti-Taq antibodies designed to inhibit Taq DNA polymerase activity at room temperature. For use in hot-start PCR.

# Quick Molecular Product Selection Chart

| Product Name                       | Cat#            | Master Mix | Hot-Start | DNA Detection | RNA Detection | Multiplex Reactions | High-Sensitivity (Low copy target) | Inhibitor-Rich Samples | Microbial & Fungal Disease Testing | Lyophilization Compatible |
|------------------------------------|-----------------|------------|-----------|---------------|---------------|---------------------|------------------------------------|------------------------|------------------------------------|---------------------------|
| Low DNA qPCR Mix                   | MDX030          | ✓          | Chemical  | ✓             |               | ✓                   | ✓                                  |                        | ✓                                  |                           |
| Fast qPCR Mix                      | MDX020          | ✓          | Antibody  | ✓             |               | ✓                   | ✓                                  |                        |                                    |                           |
| Fast 1-Step RT-qPCR Mix            | MDX032          | ✓          | Antibody  | ✓             | ✓             | ✓                   | ✓                                  |                        |                                    |                           |
| Low LOD 1-Step RT-cPCR Mix         | MDX025          | ✓          | Antibody  | ✓             | ✓             | ✓                   | ✓                                  | ✓                      |                                    |                           |
| Inhibitor-Tolerant qPCR Mix        | MDX013          | ✓          | Antibody  | ✓             |               | ✓                   |                                    | ✓                      |                                    |                           |
| Lyo-Ready qPCR Mix                 | MDX021          |            | Antibody  |               |               | ✓                   |                                    |                        |                                    | ✓                         |
| Lyo-Ready 1-Step RT-qPCR Mix       | MDX024          |            | Antibody  |               |               | ✓                   |                                    |                        |                                    | ✓                         |
| Lyo-Ready 1-Step RT-qPCR Virus Mix | MDX062          |            | Antibody  |               |               | ✓                   |                                    |                        |                                    | ✓                         |
| Glycerol-Free Taq                  | MDX011          |            | Antibody  | ✓             |               |                     | ✓                                  |                        |                                    | ✓                         |
| Low DNA Taq HS                     | MDX009 & MDX010 |            | Chemical  | ✓             |               | ✓                   |                                    |                        | ✓                                  |                           |
| Taq DNA Polymerase                 | MDX001          |            | No        | ✓             |               | ✓                   |                                    |                        |                                    |                           |
| Taq DNA HS Polymerase              | MDX008          |            | Antibody  | ✓             |               | ✓                   | ✓                                  | ✓                      |                                    |                           |



## Ordering information:

**USA**  
E: [info@meridianlifescience.com](mailto:info@meridianlifescience.com)  
Toll free: +1 800 327 6299

**UK**  
E: [info.uk@meridianlifescience.com](mailto:info.uk@meridianlifescience.com)  
Tel: +44 (0)20 8830 5300

**Germany**  
E: [info.de@meridianlifescience.com](mailto:info.de@meridianlifescience.com)  
Tel: +49 (0)3371 60222 00

**Australia**  
E: [info.au@meridianlifescience.com](mailto:info.au@meridianlifescience.com)  
Tel: +61 (0)2 9209 4180

美国迈迪安生命科学公司  
电子邮件: [vivian.li@meridianlifescience.com](mailto:vivian.li@meridianlifescience.com)  
电话: +86-159-1103-0750

**meridian** BIOSCIENCE™  
LIFE DISCOVERED. LIFE DIAGNOSED.

Connect with us:  

[www.MeridianLifeScience.com](http://www.MeridianLifeScience.com)