

# Immunoreagents for Diagnostic Applications

Meridian has been providing innovative life science solutions and building trusted partnerships for over 40 years. Meridian offers products and services that help to advance the development of diagnostic assays and new biotechnologies.

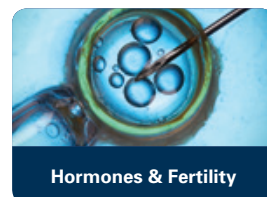
As a leading large scale manufacturer of antibodies, viral antigens, recombinant proteins, immunoglobulins and immunoassay blocking reagents, Meridian offers solutions to a wide range of industries including human diagnostics, animal health, food testing, biomarker and drug discovery. In addition, Meridian provides contract R&D, process development, and manufacturing services to the biopharmaceutical and *in vitro* diagnostic markets.

- Commercial scale manufacturing of antigens and antibodies with protein purification expertise
- Full line of immunoassay reagents, including antigens, antibodies, and blockers
- Technical support with assay development experience
- Dedicated R&D and manufacturing teams
- Robust and mature Quality System
- Flexible ordering system with specific batch reservation

## KEY FOCUS AREAS

- Native and recombinant antigens
- Monoclonal and polyclonal antibodies
- Immunoglobulins (IgG, IgM, IgA)
- Immunoassay blocking reagents

## DISEASE AREAS



- 3400+ products
- High specificity & sensitivity
- Antibody pairing
- Large lot sizes



## ANTIGENS & ANTIBODIES

### Infectious Disease

#### TROPICAL

- Chagas
- Chikungunya
- Dengue 1, 2, 3, 4
- Ebola
- Japanese Encephalitis Virus
- Leishmaniasis
- Leptospirosis
- Lyme Disease
- Malaria
- Mayaro Virus
- Newcastle Disease
- Nipah
- Yellow Fever
- Zika

#### FOOD & WATER

- *Bacillus anthracis*
- *Campylobacter jejuni*
- *Clostridium*
- *Cryptosporidium*
- *E. coli*
- *Giardia*
- Hepatitis A
- *Legionella*
- *Listeria*
- *Salmonella*
- *Shigella*
- *Staphylococcus*
- *Streptococcus*

#### ToRCH

- CMV
- HSV-1, 2
- Rubella
- Toxo

#### CHILDHOOD

- Coxsackie
- EBV
- Mumps
- Parvo B19
- Rotavirus
- RSV
- Rubeola
- VZV

#### RESPIRATORY

- Adenovirus
- *Chlamydia pneumoniae*
- Influenza A,B
- *Legionella pneumophila*
- *Mycobacterium tuberculosis*
- *Mycoplasma pneumoniae*
- Parainfluenza
- RSV
- SARS Coronavirus
- *Staphylococcus*
- *Streptococcus*

#### STDs

- *Chlamydia*
- HAV
- HBV
- HCV
- HIV-1, 2
- HPV
- HSV-1, 2
- *Neisseria*
- Syphilis
- *Trichomonas*

#### GASTROINTESTINAL

- Adenovirus
- Astrovirus
- *Campylobacter*
- *Clostridium difficile*
- *Cryptosporidium*
- *E. coli*
- *Giardia lamblia*
- *H. pylori*
- Norovirus
- Rotavirus
- *Salmonella*

### New Products:

**ZERO-X-REACT™ Zika Envelope Antigen**

**Nipah Virus**

**Japanese Encephalitis Virus (JEV)**

**TRU Block™ ULTRA**

**Vitamin D**

**PIVKA-II**

### Autoimmune

- B2-Gly-1
- C1q
- Calprotectin
- cANCA
- Cathepsin G
- dsDNA
- GMB
- Histone
- Jo-1
- La (SS-B)
- PCNA
- pANCA
- Ro (SS-A)
- Scl-70
- Sm Ag

## Cancer

- AFP
- B2M
- CA125
- CA15-3
- CA19-9
- CA242
- CA50
- CA72-4
- CEA
- Cyfra 21-1
- EGFR
- erbB-2/HER2
- HE4
- NSE
- PAP
- PIVKA-II
- PSA
- PSMA
- S-100
- Thyroglobulin

## Drugs of Abuse

- Amphetamine
- Barbitol
- Benzodiazepine
- Buprenorphine
- Caffeine
- Cocaine
- Cotinine
- EDDP
- Ketamine
- K2
- MDMA (Ecstasy)
- Methadone
- Methamphetamine
- Morphine
- Opium
- Oxycodone
- PCP
- Phenobarbital
- Propoxyphene
- THC

## Veterinary Health

- Avian Influenza
- *Borrelia*
- *Brucella abortus*
- Canine Distemper Virus (CDV)
- Heartworm
- Parvovirus
- FIV
- FeLV
- Foot-And-Mouth Disease (FMD)
- Infectious Bronchitis Virus (IBV)
- Infectious Bursal Disease (IBDV)
- Marek Disease
- Newcastle Disease Virus (NDV)
- Nipah Virus (NiV)
- Rabies Virus
- Serum Amyloid A (SAA)
- TSH
- *Trichomonas foetus*
- Transmissible Gastroenteritis Virus (TGV)

## Immunoglobulins/Blockers

- Animal IgGs – Bovine, Chicken, Goat, Mouse, Rabbit, Sheep
- Goat Anti-Human IgG, IgM, IgA
- Goat Anti-Mouse IgG
- Human IgA, IgG, IgM, IgE
- IgM Diluent
- Kappa or Lambda Light Chain
- TRU Block™

## Cardiac

- Apo A,B,C,E
- BNP
- CK-MB
- CRP
- Cystatin-C
- D-Dimer
- EGF
- FABP
- Fibrinogen
- Galectin-3
- Lp-PLA2
- MPO
- Myoglobin
- NT-proBNP
- NSE
- PAPP-A
- PCT
- Renin
- SAH
- sCD40L
- Troponin I, T
- Vitamin D

## Hormones

- ACTH
- Aldosterone
- AMH
- Cortisol
- DHEA
- Estradiol
- Estriol
- hGH
- Insulin (C-peptide)
- LH, FSH, hCG
- PAPP-A
- Progesterone, Testosterone
- Prolactin
- PTH
- TBG
- Thyroglobulin
- TPO
- TSH, T4, T3

## Antigen & Antibody Manufacturing

### Virus Manufacturing

Live or inactivated  
Proprietary Ag purification

### Recombinant Proteins

101-130L fermentation  
*E. coli*, *P. pastoris*,  
*S. cerevisiae*, Baculovirus  
in Sf9, eggs

### Monoclonal Antibodies

500+ MABs produced in  
grams Ascites production  
(55,000 Mice) Multi-Kilograms  
of Mouse IgG / year

## Allergens

- Animal
- Dust Mite
- Mold
- Pollen

# IMMUNOASSAY INTERFERENCE BLOCKERS

## HAMA, RF, HA All-in-1 Blocking

### TRU Block™ ULTRA

- Blocking formulation with proprietary active blocking agent that reduces HAMA, RF & HA for ELISA & LF

## HAMA Blocking

### Mouse IgG

- Passive HAMA blocker for double-mouse monoclonal sandwich assays
- Large scale manufacturer (>100kg/yr)

## HA Blocking

### Animal IgG

- For assays with a PAb as capture or detection
- Reduces interference caused by Heterophilic Antibodies (HA) present in patient sample that can react with the antibodies

The graph on the right represents two commercial sandwich assays (CA19-9 and FSH) which were used to compare TRU Block™ against Mouse IgG and a competitor.

Three different HAMA blockers were added into the sample diluent buffer (containing no Mouse IgG) separately at four different concentrations (5mg/mL, 2.5mg/mL, 1.25mg/mL and 0.625mg/mL). HAMA activity was measured by the suppression of the unblocked HAMA signal.

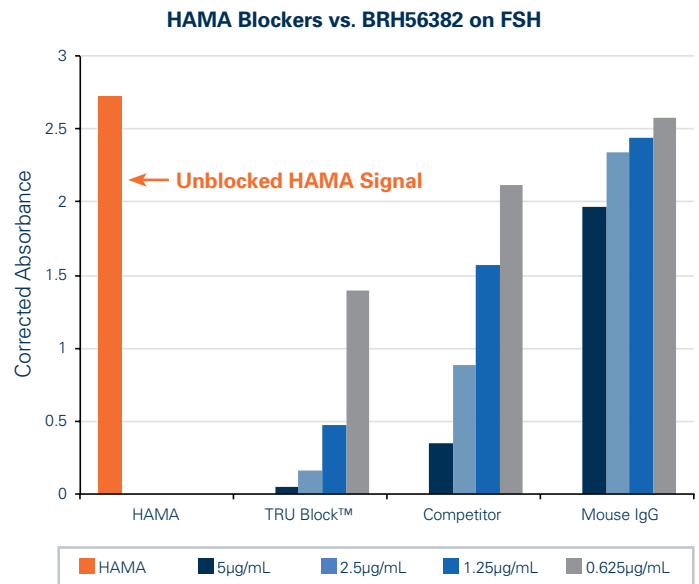
## RF/IgG Absorbent

### IgG Absorbent GAH IgG(Fc)

- Purified GAH IgG Fc fragment, no reactivity with IgM or IgA
- Removes human IgG and IgG/RF complexes from serum prior to testing for IgM Ab

### IgM Diluent

- Blocks IgG antibody interference, HA & RF
- Will bind to open sites on the solid phase to prevent interference



## ABOUT MERIDIAN BIOSCIENCE

Meridian Bioscience Inc. is an international producer and distributor of a range of diagnostic test kits. The company was founded in 1976 and is headquartered in Cincinnati, Ohio. The company consists of two segments including Diagnostics and Life Science (molecular and immunoassay reagents).

40+ Years History > 650+ Employees > \$200M+ in sales > 12 Worldwide Locations > 70+ Global Markets > Nasdaq: VIVO

To place an order, please contact:

[www.MeridianBioscience.com/LifeScience](http://www.MeridianBioscience.com/LifeScience)

**Meridian Life Science Inc.**

5171 Wilfong Road  
Memphis, TN 38134

901-382-8716 / 800-327-6299  
[info@meridianlifescience.com](mailto:info@meridianlifescience.com)