

New Products

2019



- FastRNA Win for Plant Kit
- MPure-12™
- FastGro™ FBS Replacement
- Bovine Extract for Maximum Mitogenicity
- Complete Solution for Cryopreservation

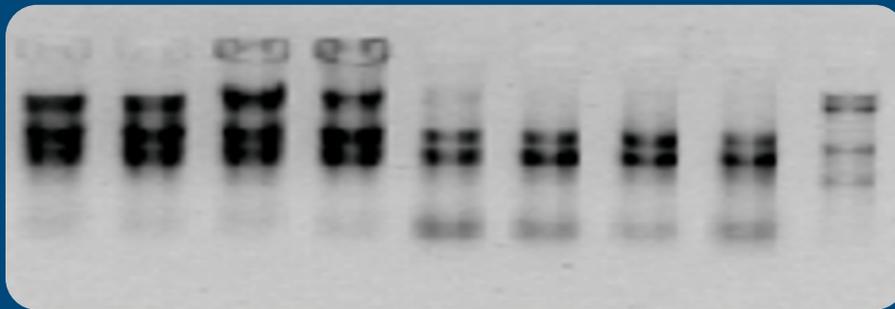
- Cellular Analysis Kits
- Mycoplasma Detection and Removal
- PhytoPure™ Plant Science Biochemicals
- Melatonin ELISA Kits
- Chemiluminescence Immunoassays

FastRNA Win for Plant Kit

Easy and quick isolation of total RNA from a wide variety of plant samples

- Rapid, thorough and reproducible sample lysis with the FastPrep Instrument
- Selective removal of DNA by binding to a carrier material during the lysis step
- Highly purified RNA for better RT-PCR results
- No phenol/chloroform
- Protocol included for simultaneous isolation of proteins

The FastRNA Win for Plant Kit is designed to isolate and purify high quality total RNA from plant cells and tissues. The use of the FastPrep instrument combined with unique lysis buffers guarantees an efficient lysis of the starting material and a simultaneous inactivation of endogenous RNases. Genomic DNA is separated from the total RNA by binding to specially optimized mineral carrier particles included in the lysis buffer. The RNA is then mixed with ethanol and transferred to the RNA binding membrane. Total RNA then binds, contaminants are washed away, and the pure RNA is eluted.



High-quality total RNA from tomato leaves (lane 1-4) and wheat leaves (lane 5-8)

Cellular total RNA was isolated from tomato and wheat leaves using the FastRNA Win for Plant Kit. RNA was separated on a denaturing agarose gel.

Total RNA isolated with the FastRNA Win for Plant Kit is highly pure and ready to use for a broad range of downstream applications:

- Northern Blot
- RNA dot blots
- In vitro translation
- RT-PCR
- ddRT-PCR
- cDNA-libraries
- TaqMan® analysis and array technologies

Description	Cat. No.
FastRNA Win for Plant Kit (50 preps)	116080050

MPure-12™

Automated purification of up to 12 samples

MPure-12™ is an automated benchtop system for rapid purification of nucleic acids from a wide variety of biospecimens using magnetic bead separation technology. Combined with a uniquely designed magnetic bead processing chamber, the fully integrated and easy to use pre-packaged reagent kits deliver superior yields of nucleic acids and high quality results at an affordable price.

Step away from the norm and experience the difference in nucleic acid purification.

- Fully Automated
- Fast and Accurate
- Magnetic Bead Technology
- No Cross-Contamination
- UV Lamp for Decontamination
- Flexibility & Simplicity
- Highest Quality and Yield
- 15 Reagent Kits for any Sample Type
- Lot-to-Lot Consistency
- Minimized Nucleic Acid Loss or Degradation



The MPure-12™ system employs an advanced magnetic bead separation technology that enables rapid and efficient purification of nucleic acids. This process includes four main steps: lysis, binding, washing and elution. Purifying nucleic acids with the MPure-12™ system takes only 35 to 70 minutes depending on the selected protocol and kit.

High Quality, Reliable, Consistent Results – Explore New Possibilities in Nucleic Acid Purification!

True Walk Away Automation

LOAD

Load samples, reagent cartridges and consumables



RUN

Select a protocol with a quick barcode scan and let the instrument do the rest



OBTAIN

At the end of the run, purified nucleic acids are auto collected

Description

MPure-12™ Nucleic Acid Purification System

Cat. No.

07EMC017

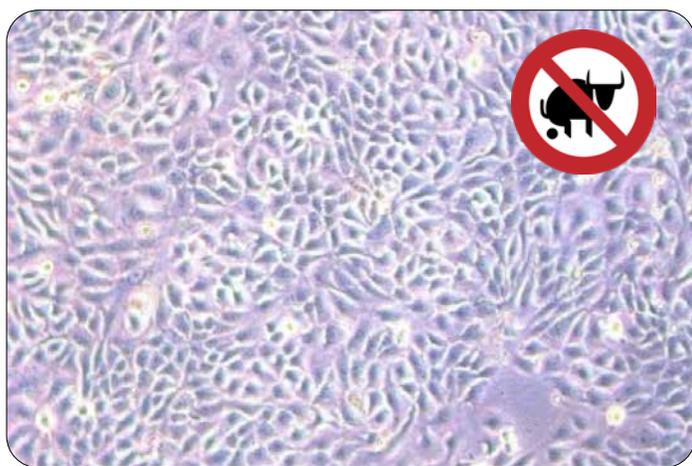
FastGro™, Fully Chemically Defined FBS Replacement for Cell Culture

Fetal bovine serum (FBS) is widely used as a serum-supplement for in vitro cell culture media. FBS promotes healthy cell growth by providing an undefined mixture of nutrients, such as proteins, attachment factors, growth factors, lipids, and hormones. However, due to its undefined nature, FBS can lead to unexpected and undesired stimulation of cells and carry the biorisk of animal protein or pathogen contamination, including bovine spongiform encephalopathy (BSE).

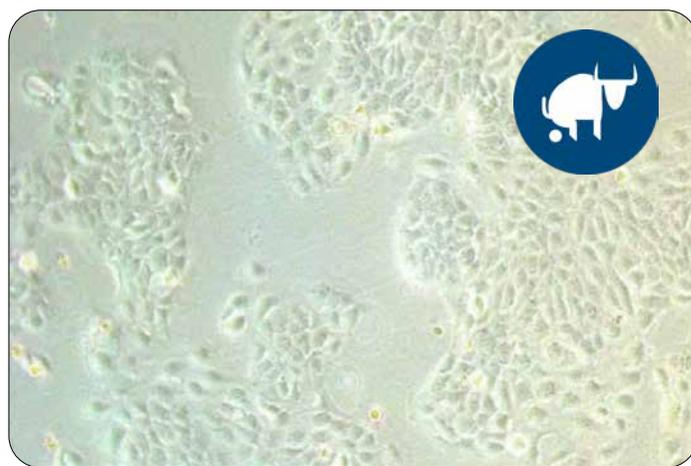
To avoid these concerns and ensure quality, safety, and consistency, MP Biomedicals is pleased to launch FastGro™, a fully chemically defined FBS replacement for cell culture use. This unique product allows culturing a wide range of cells in vitro without the use of serum or any animal or human derived compounds. All components in FastGro™ are highly purified and identified chemical compounds, ensuring:

- Chemically defined nature without lot-to-lot variations
- No animal or human derived materials or compounds
- No interference with hormones or growth factors
- Elimination of the risk of contaminants – viruses, mycoplasma, prions, etc.
- Wide range of cell culture practices
- Storage in the refrigerator, and no need for thawing before use

Description	Cat. No.
FastGro™, Chemically Defined FBS Replacement (100 mL)	092640049
FastGro™, Chemically Defined FBS Replacement (500 mL)	092640054



HaCaT cells in medium enriched with 10% FastGro



HaCaT cells in medium enriched with 10% FBS

Bovine Extract for Maximum Mitogenicity in Cell Culture

Containing a full spectrum of putative mitogens and growth factors, bovine pituitary extract (BPE) and bovine brain extract (BBE) continue to be the most successful tissue-sourced extracts for culturing a wide range of cells in vitro, particularly cells of epithelial origin and stem cells. To maintain the full spectrum of biological activities and minimize the biorisk of animal origin products, MP Bio recently launched BPE and BBE, derived from young, healthy New Zealand cattle with USDA approved sources.

Our bovine pituitary extract (BPE):

- Promotes maximum cell mitogenicity
- Promotes differentiation of pluripotent stem cells
- Allows serum-free culturing of primary epithelial cell types without fibroblast contamination
- Sterile filtration from non-lyophilized tissue
- Maintains consistent activity in serum-free culture systems
- Low TGF- β level to minimize any pre-mature senescence
- Cost-effective: a third of the cost of serum



Bovine brain extract (BBE):

- Promotes maximum cell mitogenicity
- Promotes differentiation of pluripotent stem cells
- Supports growth and extended passaging of primary neuronal cell types
- Sterile filtration from non-lyophilized tissue
- Cost-effective alternative to endothelial cell growth supplement

Description	Cat. No.
Bovine Pituitary Extract (2.5 mL)	092850450
Bovine Pituitary Extract (10 mL)	092850445
Bovine Brain Extract (2.5 mL)	092850550

A Complete Solution for Cryopreservation

With over 40 years of experience manufacturing and supplying cell biology products, MP Bio understands the challenges associated with cell cryopreservation. Cryopreservation media from MP Bio ensures:

- Consistent high cell viability
- Serum-free and protein-free formulations
- Validation with multiple cell types
- Long-term cell storage
- Balanced components for maintaining cellular functions
- Long shelf life



We offer a complete solution for cryopreservation to meet your needs:

- **Cryopres™ Dimethyl Sulfoxide (>99.9% USP DMSO)** – commonly used in cell cryopreservation, along with glycerol, to prevent damage to the cell membrane during freezing.
- **pZerve™** – ready-to-use, sterile, cryopreservation solution that does not contain dimethyl sulfoxide (DMSO), fetal bovine serum or other animal proteins.
- **Cell Cryopreservation Medium with 10% DMSO** – a balanced, protein free, ready-to-use cryopreservation solution with 10% USP DMSO (Cryopres™).
- **2-8 CELLsium™** – cytoprotective, protein free, ready-to-use biosolution without DMSO for the short-term storage of cells or tissue

Description	Cat. No.
pZerve™ Cryopreservation Solution, 20 mL	092030346
pZerve™ Cryopreservation Solution, 60 mL	0920303M2
Cell Cryopreservation Medium with 10% DMSO, 50 mL	092780248
Cryopres™ Dimethyl Sulfoxide (>99.9% USP DMSO), 10 mL	092780145
Cryopres™ Dimethyl Sulfoxide (>99.9% USP DMSO), 50 mL	092780148
2-8 CELLsium™ medium for short-term cell storage, 100 mL	092780349
2-8 CELLsium™ medium for short-term cell storage, 500 mL	092780354

High Performance Cellular Analysis Kits

MP Bio recently introduced new cellular analysis kits at the whole cell level. These kits are supported by our diverse scientific expertise, time-tested products and technology platforms. They provide research tools to monitor cell viability, proliferation, mitophagy and cellular senescence.

1 *FastCounting™ Cell Counting Kits*

Provides a sensitive and convenient method to determine cell viability in cell proliferation and cytotoxicity assays.

- Highest sensitivity dye for cell viability
- Lowest cytotoxicity among tetrazolium reagents
- Simple procedures without thawing reagents

2 *FastMitophagy™ Detection Kit*

Designed for mitophagy detection in mammalian cells.

- Simple procedure: just add the Mitophagy dye - no need for transfection
- More sensitive than other autophagy markers

3 *FastCellular™ Senescence Detection Kit*

Detect senescent cells with much higher sensitivity than X-gal

- Higher sensitivity due to new fluorogenic detection probe
- Applicable for living cells and fixed tissues

Description	Cat. No.
FastCounting™ Cell Counting Kit (100 tests)	092690131
FastCounting™ Cell Counting Kit (500 tests)	092690132
FastMitophagy™ Detection Kit (5 x 96 well plates or 25 x 35 mm dish)	092690201
FastCellular™ Senescence Detection Kit - SPiDER-β-Gal (1 x 6 well plate)	092690301



A Complete Solution for Mycoplasma Management in Cell Culture

One of the major issues in mammalian cell culture is infection due to mycoplasma. These simple bacteria can infect the culture and alter a variety of cellular characteristics and functionalities (metabolism, morphology, proliferation, etc.), often leading to experimental artifacts and cell loss. Therefore, it is essential to detect the presence of mycoplasma in your cell culture and remove them effectively, without compromising cell viability. The unique Mycoplasma PCR Detection Kit and Mycoplasma Removal Agent (MRA) from MP Bio can completely manage the mycoplasma contamination in your cell culture.

Mycoplasma Detection

Myco-Sniff™ Mycoplasma PCR Detection Kit greatly simplifies testing and detection of mycoplasma contamination in cell cultures, with the following advantages:

- **Highly sensitive:** Detection limit as low as 20 CFU/mL.
- **Wide detection range of mycoplasma:** Detect mycoplasma from over 8 genera, including 209 individual species.
- **Premixed for ease-of-use:** All PCR reaction components included; just add template DNA or samples.
- **Highly specific:** No interference of animal or bacterial DNA.
- **Fast:** Detection can be achieved within 3 hours.
- **Elimination of cross-contamination:** 8-MOP prevents cross-contamination from previous PCR products.

Similar to our Myco-Sniff™ product, but with higher sensitivity detection (as low as 10 CFU/mL), we also offer Myco-Sniff-Valid™ Mycoplasma PCR Detection Kit, which is validated for sensitive, specific and rapid detection of mycoplasma.

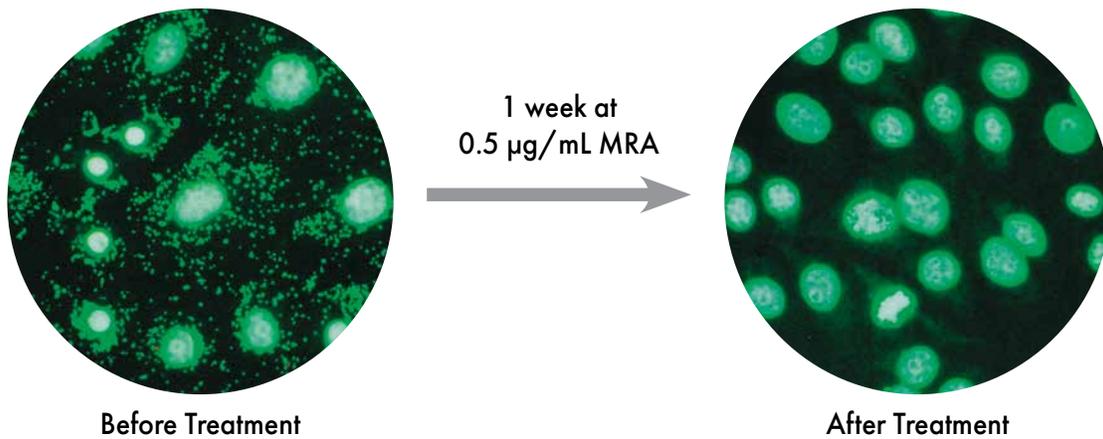
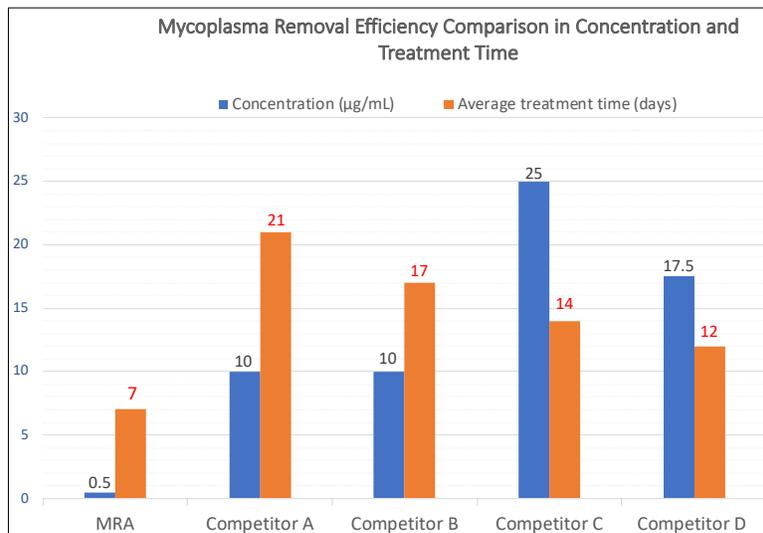
Description	Cat. No.
Myco-Sniff™ Mycoplasma PCR Detection Kit (48 tests)	093050201
Myco-Sniff-Valid™ Mycoplasma PCR Detection Kit (48 tests)	093050301



Mycoplasma Removal

Once mycoplasma is detected in cell culture medium, it is essential to eliminate it from the cultures without losing cells or causing further contamination. MP Bio's Mycoplasma Removal Agent (MRA) is the most reliable solution for mycoplasma removal and prevention, ensuring quality results (as shown in the following figure), including:

- Elimination of multiple mycoplasma species within one week
- Effective treatment of mycoplasma at the lowest dosage available in the market (0.5 µg/mL)
- Prevention of culture recontamination at 0.1 µg/mL
- Compatibility with most mammalian cell lines
- Sterility and low cytotoxicity
- Citation and recognition in 550+ scientific publications



Description	Cat. No.
Mycoplasma Removal Agent (MRA) (5 mL)	093050044

PhytoPure™ Plant Science Biochemicals

In our continuing efforts to cultivate the widest showcase of biochemicals and reagents for research and development, MP Bio is pleased to offer our exclusive line of PhytoPure™ brand plant science biochemicals. Our portfolio of new PhytoPure reagents includes a variety of plant growth regulators used in agriculture, horticulture and viticulture. These plant growth regulators include auxins, cytokinins, gibberellins, abscisic acids, and ethylene. PhytoPure reagents are specifically selected to be suitable for sensitive roots and shoots propagation, plant health, growth and viability in all plant-based applications.

While purity is important, it alone may not be the only factor in selecting the best reagent. We also consider criteria such as specific activity, salt form, concentration, appearance, intended use and reproducibility in specific applications. PhytoPure reagents provide you the flexibility and convenience of choosing the exact product to achieve the precise results you desire in all your plant science research and development projects. Don't stunt the growth of your plant research, let PhytoPure reagents help yield the results you expect and deserve.

PhytoPure™ Auxins

Auxins are compounds containing an aromatic ring and a carboxylic acid moiety. They are a class of phytohormones that play an integral role in many growth and behavior processes in the life cycle of plants. At the molecular level, auxins regulate gene expression, while on the cellular level, they are essential for plant cell growth and differentiation. This in turn contributes to the plant's overall size. In addition to our existing line of popular auxins, MP Bio is now offering a selection of new auxin products to enhance your plant research.

Description	Cat. No.
4-Bromophenoxyacetic Acid, PhytoPure™	02183949
4-Chloroindole-3-Acetic Acid, PhytoPure™	02183950
(4-Chloro-2-Methylphenoxy) Acetic Acid, PhytoPure™	02183952
4-Chlorophenoxyacetic Acid, PhytoPure™	02183953
3,6-Dichloro-2-Methoxybenzoic Acid, PhytoPure™	02183951
2,4-Dichlorophenoxyacetic Acid Sodium Salt, PhytoPure™	02183954
2-(2,4-Dichlorophenoxy)-Propionic Acid, PhytoPure™	02183955
Melatonin, PhytoPure™	02183956
1-Naphthaleneacetic Acid, PhytoPure™	02183957
1-Naphthaleneacetic Acid Sodium Salt, PhytoPure™	02183958
β-Naphthoxyacetic Acid, PhytoPure™	02183959
Phenylacetic Acid, PhytoPure™	02183960
Phloroglucinol, PhytoPure™	02183961
Picloram, PhytoPure™	02183962
2,4,5-Trichlorophenoxyacetic Acid Potassium Salt, PhytoPure™	02183963
2,3,5-Triiodobenzoic Acid, PhytoPure™	02183964



PhytoPure™ Cytokinins

Cytokinins are a class of plant growth hormones that help promote cell division, i.e. cytokinesis, in plant roots and shoots. They are primarily involved in cell growth and differentiation but may also affect axillary bud growth and leaf senescence. Unlike auxins, which migrate down from the growing tip, cytokinins work from the roots up to promote lateral growth.

Many plant growth processes depend upon cytokinins, including cell division, differentiation, and shoot and root morphogenesis. Cytokinins also regulate axillary bud growth and apical dominance. They have been shown to slow aging in plants by preventing protein breakdown and activating protein synthesis. We are pleased to add two new PhytoPure™ cytokinins to our extensive portfolio of cytokinins.

Description	Cat. No.
Thidiazuron, PhytoPure™	02183965
m-Topolin, PhytoPure™	02183966

PhytoPure™ Gibberellins

Gibberellins are plant hormones that stimulate stem elongation, initiate seed germination, and flowering. Gibberellins are known to break plant dormancy, delay fruit ripening, and also delay leaf and fruit senescence. Where auxins promote the growth of the shoot system and apical dominance, gibberellins promote stem elongation and play no role in apical dominance. In addition to our standard Gibberellic Acid, we also offer Gibberellic Acid Potassium Salt 10%, Gibberellin A3, and our all new Gibberellin A4 + A7 PhytoPure reagent.

Description	Cat. No.
Gibberellin A4 + A7, PhytoPure™	02183967

PhytoPure™ Abscisic Acid

Abscisic acid is a plant hormone that is used to promote developmental pathways such as somatic embryogenesis. It functions in developmental processes such as seed and bud dormancy, stomatal closure, inhibition of cell division, and organ size. It is important in plants facing environmental stresses such as drought, cold tolerance, soil salinity and heat stress. Abscisic acid-mediated signaling also plays a role in response to plant pathogens.

Description	Cat. No.
(+)-Abscisic Acid, PhytoPure™	02183968



PhytoPure™ Ethylene

As ethylene is a gas, it is difficult to handle, store and administer to plants, yet it is one of the important growth regulators available. Ethylene is commonly used to control fruit ripening, abscission and flower induction, especially for crops like cotton, pineapples, and many other fruits and vegetables.

Ethephon is actually 2-chloroethylphosphonic acid, which is a stable, moderately toxic molecule. When administered to plants, it is metabolized and converted into ethylene, and then functions as a plant growth regulator. Ethephon is an excellent option for improving plant structure, preventing early flowering and controlling excessive plant growth. We offer Ethephon as a dry powder reagent and a premixed solution.

Description	Cat. No.
Ethephon, PhytoPure™	02183969
Ethephon Solution 21.7%	02183970





Studying sleep?

Measure Melatonin in saliva or serum faster than ever, using less sample volume

- Fast**
Short 2 hour incubation, no extraction step required
- Efficient**
Uses less sample volume (50 μ L)
- Highly Sensitive**
Measures < 1 pg/mL
- Accurate**
Excellent sample-to-sample correlation with Mass Spec

Analyte	Tests	Cat. No.	Sample Vol.	Sensitivity*
Melatonin ELISA Kit - Saliva	96	07P634A	50 μ L	0.62 pg/mL
Melatonin ELISA Kit - Serum	96	07P534A	25 μ L	2.5 pg/mL

*Kits are designed for use with human samples, however other species may be effectively analyzed.

MP Chemiluminescence Immunoassays

Highly Sensitive Detection of Hormones using MP Chemiluminescence Immunoassays

Endocrinology research today continues to advance our knowledge of how hormones work to regulate bodily and cellular functions, as well as how their misregulation can lead to a variety of disorders. Researchers all over the world are focused on discovering more about growth, metabolism, reproduction and neuroendocrinology to learn more about hormone-related and metabolic disorders. These disorders include hypothyroidism, hyperthyroidism, congenital adrenal hyperplasia, Cushing's disease, adrenal insufficiency, and endocrine neoplasia, as well as common metabolic disorders including diabetes, obesity, hypoglycemia, cystic fibrosis and phenylketonuria.

MP Bio offers hormone detection kits that allow you to carry out the critical research that is so important to advancing our knowledge of how hormones function. Our goal is to enable scientists with powerful research tools which can lead to the discovery of treatments for disorders that many people and animals are suffering from today. Our highly sensitive immunoassays for detecting hormone concentration levels have been utilized in laboratories for over 30 years by researchers all over the world, showing just how reliable our tests are at helping you to collect the information you need. MP Bio hormone detection kits are offered in multiple technology formats, including Radioimmunoassays (RIA), Enzyme Immunoassays (EIA) and our newly added Chemiluminescence Immunoassays (ChLIA). Simply rely on what works.

- **Ultra-Sensitive:** Low Limit of Detection
- **Simple:** Easy-to-Use Protocol
- **Time-Saving:** High-Throughput for Multiple Samples
- **Efficient:** Small Sample Volumes
- **Informative:** Quantitative Measurements
- **Fast:** Short Incubation Times
- **Flexible:** Ability to Adapt to a Variety of Animal Species*



*Stressed about your research?
Trust our Assays!*

Stress Hormones:

Cortisol, Human Growth Hormone (hGH), Prolactin

Thyroid Hormones:

Triiodothyronine (T3), Thyroxine (T4), Thyroid Stimulating Hormone (TSH)

Digestion/Metabolism Analytes:

C-Peptide, Insulin

Reproductive Hormones:

17 β -Estradiol (E2), Follicle Stimulating Hormone (FSH), Human Chorionic Gonadotropin (hCG), Luteinizing Hormone (LH), Progesterone, Prolactin, Testosterone

Other Endocrinology Hormones:

17 α -hydroxyprogesterone (17OHP), Dehydroepiandrosterone (DHEA), Dehydroepiandrosterone Sulfate (DHEA-S)

MP Bio Chemiluminescence Immunoassays for Hormone Measurement

Analyte	Sample Type	Tests	Catalog No.	Sample Vol.	Sensitivity*
17 α -hydroxyprogesterone	Serum or Plasma	96	07M5275A	25 μ L	0.040 ng/mL
Cortisol	Serum or Plasma	96	07M3675A	25 μ L	0.27 μ g/dL
C-Peptide	Serum	96	07M2775A	50 μ L	0.025 ng/mL
Dehydroepiandrosterone (DHEA)	Serum or Plasma	96	07M7475A	25 μ L	0.15 ng/mL
Dehydroepiandrosterone Sulfate (DHEA-S)	Serum or Plasma	96	07M5175A	10 μ L	0.025 μ g/mL
E2 (17 β -Estradiol)	Serum or Plasma	96	07M4975A	25 μ L	6.5 pg/mL
Follicle Stimulating Hormone (FSH)	Serum	96	07M475A	50 μ L	0.8 mIU/mL
		192	07M475B		
Growth Hormone (GH)	Serum	96	07M1775A	50 μ L	0.118 μ IU/mL
hCG	Serum	96	07M875A	25 μ L	0.016 mIU/mL
		192	07M875B		
Insulin	Serum	96	07M2475A	50 μ L	0.114 μ IU/mL
Luteinizing Hormone (LH)	Serum	96	07M675A	50 μ L	0.8 mIU/mL
		192	07M675B		
Progesterone	Serum or Plasma	96	07M4875A	25 μ L	0.105 ng/mL
Prolactin	Serum	96	07M775A	25 μ L	0.8 ng/mL
		192	07M775B		
T3 (Free)	Serum	96	07M1375A	50 μ L	0.03 ng/dL
		192	07M1375B		
T3 (Total)	Serum or Plasma	96	07M175A	50 μ L	0.126 ng/mL
		192	07M175B		
T3 Uptake	Serum or Plasma	96	07M575A	25 μ L	Inquire
		192	07M575B		
T4 (Free)	Serum	96	07M1275A	50 μ L	0.03 ng/dL
		192	07M1275B		
T4 (Total)	Serum or Plasma	96	07M275A	25 μ L	0.1 μ g/dL
		192	07M275B		
Testosterone	Serum or Plasma	96	07M3775A	10 μ L	0.026 ng/mL
Thyroid Stimulating Hormone (TSH)	Serum	96	07M375A	50 μ L	1 hr incubation: 0.078 μ IU/mL; 2 hr incubation: 0.027 μ IU/mL
		192	07M375B		

*Kits are designed for use with human samples, however other species may be effectively analyzed.
All kits are available for research use. Some kits may be cleared for IVD use. Contact us for more information.



One Call. One Source. A World of 40,000+ Research Reagents.

- Apoptosis
- Cell Biology
- Culture Growth Media
- FastPrep® Sample Prep
- Immunology
- Molecular Biology
- Adsorbents
- Biochemicals
- Fine Chemicals
- Labware
- Dosimetry
- Research Diets
- SafTest™ Food Quality
- Diagnostics
- Drugs of Abuse
- Infectious Disease
- EIA/RIA

MP Biomedicals

Americas: 800.854.0530 | custserv@mpbio.com
Europe: 00800.7777.9999 | custserv.eur@mpbio.com
Japan: 03.6667.0730 | sales.japan@mpbio.com
Singapore: 65.6775.0008 | enquiry_ap@mpbio.com
South Korea: 82.2.425.5991 | info.korea@mpbio.com
Australia: 61.2.8824.2100 | aus.cs@mpbio.com
China: 86.4000.150.0680 | mpchina@mpbio.com
India: 91.22.27636921/22/24 | info.india@mpbio.com
New Zealand: 64.9.912.2460 | nzsales@mpbio.com

LEARN MORE

www.mpbio.com