

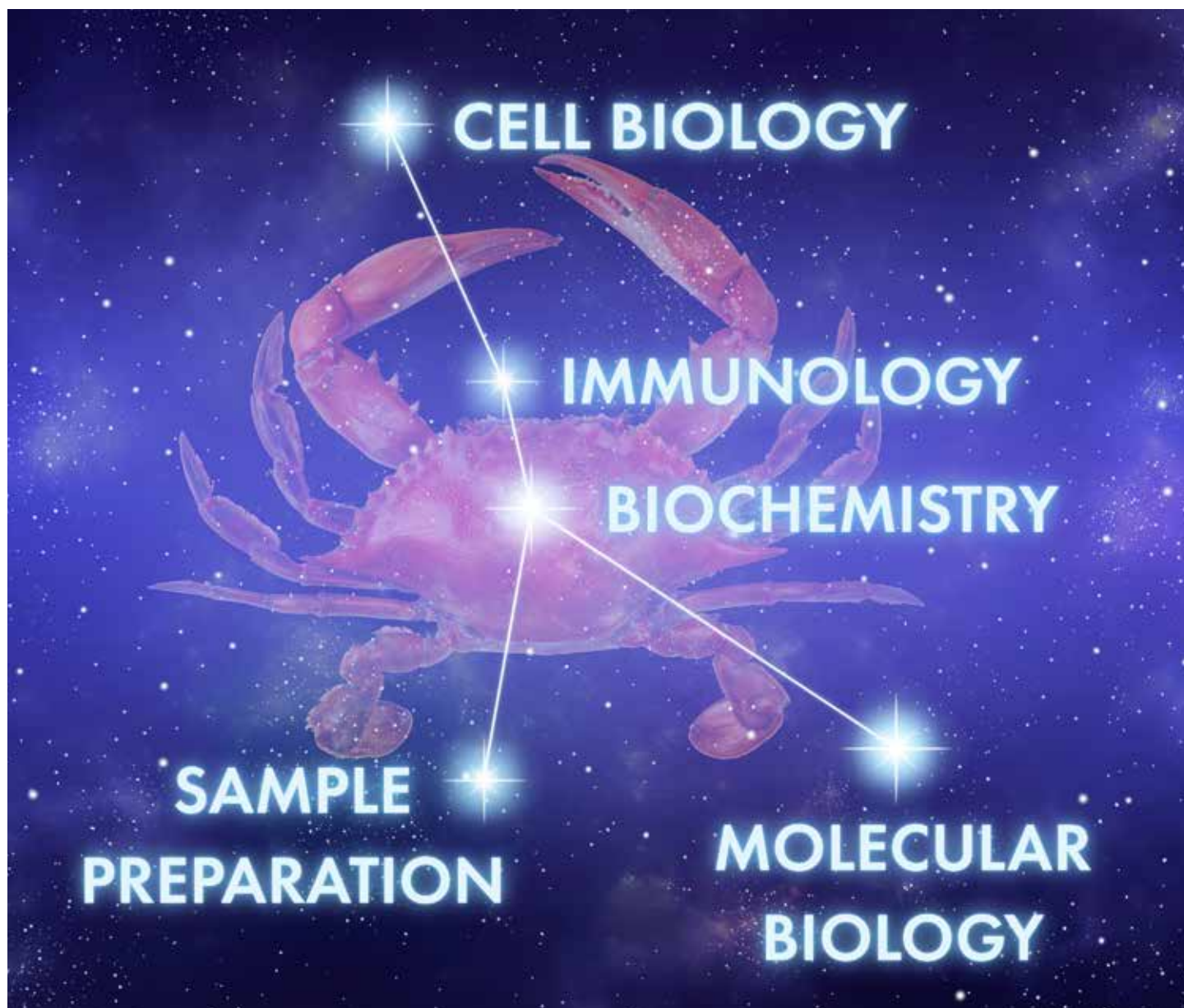
# Reagents and Kits for Cancer Research

One Source. One Call. World of Cancer Research Reagents.



## Cancer Research

With a variety of cancers impacting communities on a global level, there is a need for a wide range of innovative and high-quality reagents to accelerate cancer research. MP Bio is a one stop destination for all your reagent needs, offering complete solutions for cancer research applications. From biochemical and cell culture reagents to sample preparation solutions and cell biology and immunology tools, we are your partner in cancer research. Our time-tested, high-quality reagents and kits are recommended by researchers and backed by thousands of scientific publications. We provide scientists the tools and resources to remain on the forefront of game-changing discoveries in cancer research.



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# Cell Biology and Immunology Reagents

## Cell Culture Reagents

MP Bio offers a broad portfolio of high-quality media, antibiotics, and supplements for mammalian cell culture. A complete range of chemically-defined basal media are available to support optimal cell growth, in addition to chemically-defined FBS replacement options. We also have a plethora of essential sera, growth factors, supplements, proteins, and enzymes to support your cell and tissue culture needs. Our effective antibiotics will help keep your cell cultures free of contamination without altering cellular growth parameters. Mycoplasma Removal Agent and Stain Kits help detect and combat mycoplasma contamination, one of the major issues present in mammalian cell culture. To top it off, we carry the highly cited and recommended 7X detergent, utilized by scientists around the world to clean equipment and supplies without compromising your cell cultures.

# NEW!

Cat. No.  
092640049

**FastGro™** is a unique, fully chemically defined FBS replacement for cell culture use that allows for the in vitro culturing of a wide range of cells without the use of serum or any animal or human derived compounds.

- 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
- No thawing necessary - storage in the refrigerator



Recommended cell culture media set-up using FastGro™ for a few major primary cell culture types:

PRIMARY CELL CULTURE TYPE	RECOMMENDED GROWTH FACTOR	RECOMMENDED HORMONES	FINAL MEDIUM CONCENTRATION	REQUIREMENT
Primary kidney cultures				
FastGro™ 10%			0.5 µg/mL	essential
DMEM high glucose / F-12		Hydrocortisone	0.1 µg/mL	essential
		Epinephrine	0.5 µg/mL	essential
	EGF (human, recombinant)		50 ng/mL	optimal/ beneficial
		Triiodo-L- thyronine	10 pg/mL	essential
	EGF (human, recombinant)		10 ng/mL	optimal/ beneficial
Primary hepatocytes				
FastGro™ 10-15%			5 µg/mL	essential
Williams' Medium E		Hydrocortisone	0.5 µg/mL	essential
	EGF (human, recombinant)		50 ng/mL	optimal/ beneficial
Primary keratinocytes*				
FastGro™ 10%		Bovine Pituitary Extract (BPE)	4 µl/mL	essential
DMEM/F-12 1:3 ratio		Hydrocortisone	5 µg/mL	essential
		Epinephrine	0.5 µg/mL	essential
	EGF (human, recombinant)		0.125 ng/mL	optimal/ beneficial
Primary cardiomyocytes				
FastGro™ 10%			1 ng/mL (1.5 nM)	essential
Claycomb Medium		Insulin (recombinant human)	5 µg/mL	essential
	EGF (human, recombinant)		5 ng / mL	optimal/ beneficial
	bFGF (human, recombinant)		5 ng / mL	optimal/ beneficial
Neuronal Cells				
FastGro™ 10%	EGF (human, recombinant)		50 ng/mL	optimal/ beneficial
DMEM high glucose		Insulin (recombinant human)	0.5 ug/mL	essential

### Chemically-Defined FBS Replacement and Basal Media

Low-serum and serum-free media provide important advantages in animal cell culture, as the chemically controlled environment offers improved reproducibility and safety by removing lot-to-lot variation and biorisk inherent to animal serum. TCM™ is a fortified, multipurpose serum replacement for long-term culturing of many types of anchorage dependent and suspension cultures with a variety of species, especially primary cell cultures. TCH™ is particularly developed for long-term culturing of human cells.

- Chemically defined nature
- Free of biological variability
- Free of growth factors or steroid hormones
- Long-term culture with no chromosomal or morphological alterations
- Versatile to any basic cell culture media
- Low endotoxin
- Low protein content to simplify downstream processing and purification processes

Description	Cat. No.
TCM™ defined serum replacement, 50x concentrate	092010026
TCH™ defined serum replacement, 50x concentrate	092020026

A complete range of chemically-defined basal media are also available to support optimal cell growth, providing:

- Chemically-defined essential components
- Lot-to-lot consistency
- Animal-component free media
- No proteins, hormones, or other growth factors
- No biological contamination such as viruses, mycoplasma, or prions

Description	Cat. No.
Basal Medium Eagle (BME) Vitamin Concentrate (100X)	091600449
Dulbecco's Modification of Eagle's Medium (1X Solution) With 4.5 g/L Dextrose, Without L-Glutamine and Inositol	091642954
Dulbecco's Modification of Eagle's Medium (1X Solution) Without L- Glutamine, Leucine, Sodium Pyruvate	091642149
Dulbecco's Modification of Eagle's Medium (DMEM) (1X Solution) Without L-Glutamine, Phenol Red	091642754
Minimum Essential Medium Eagle (Modified) (1X Solution) With Hank's Salts, 0.35 g/L Sodium Bicarbonate Without L-Glutamine	091213254
1X RPMI Without L-Glutamine, L-Cysteine, L-Cystine, and L-Methionine	091646454
1X RPMI 1640 Without L-Glutamine and Phosphate, With 0.85 g/L Sodium Bicarbonate	091629754
RPMI 1640 (1X Solution) Without L-Glutamine and L-Leucine	091629149
RPMI 1640 With 2 g/L Sodium Bicarbonate, Without L-Glutamine & Glucose	091646854
Williams Medium E, Powder, With L-Glutamine, Without Sodium Bicarbonate	091050122

# Cell Biology and Immunology Reagents

## Cell Culture Reagents

### Antibiotics

Whether you require an antibiotic active against gram-positive bacteria, gram-negative bacteria, yeast, or fungi, MP Bio provides a wide range of high-quality antibiotics to treat your cell culture contamination.

- Easy to use – Convenient addition to liquid culture medium
- High potency – Keep your cell cultures contamination free
- Broad spectrum – Effective against a wide range of microbial contaminants

Description	Cat. No.
Amphotericin B, 250 µg/mL (Fungizone)	091672346
	091672348
Gentamicin Sulfate Solution, 10 mg/mL	091676045
	0916760J8
Gentamicin Reagent Solution, 50 mg/mL	091676245
	0916762J8
G418 Sulfate, 50 mg/mL (Geneticin)	091672546
	091672548
Kanamycin Sulfate, 5 mg/mL	091672048
Penicillin-Streptomycin (10,000 IU/mL, 10 mg/mL)	091670249
Penicillin-Streptomycin-Amphotericin B (100X)	091674049

### Animal Sera

Animal serum has been widely used as a nutrient boost for most cell-culture applications in the life sciences. Fetal bovine serum (FBS) is one of the most highly implemented serum supplements for in vitro cell culture. Our heat-inactivated CELlect FBS Gold is the industry standard for FBS supplements and ensures reliability and consistent high-quality. MP Bio's sera meets and exceeds quality control standards for high performance in cell culture.

- High performance for broad cell types
- Low endotoxin levels
- Free of mycoplasma contamination
- Free of disease from animal sources
- Minimized lot-to-lot variability
- Sterility
- Country of origin and traceability

Description	Cat. No.
CELlect™ FBS, GOLD, Heat Inactivated	092916849
Human Serum	092930149
Human Type AB Serum from Male Donors	092930949
Human Serum, Pooled	092931149
Rabbit Serum	092941149
Goat Serum	092939149
Newborn Bovine Serum	092912149
Donor Horse Serum	092921149

## Mycoplasma Detection and Removal

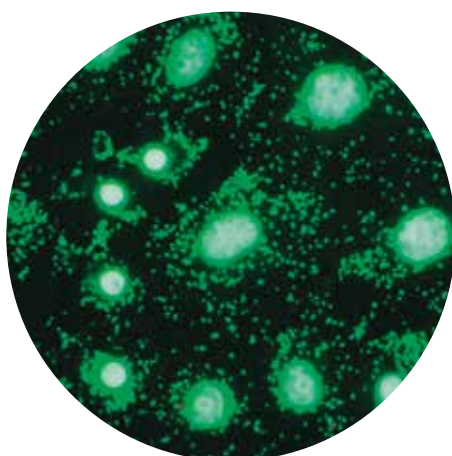
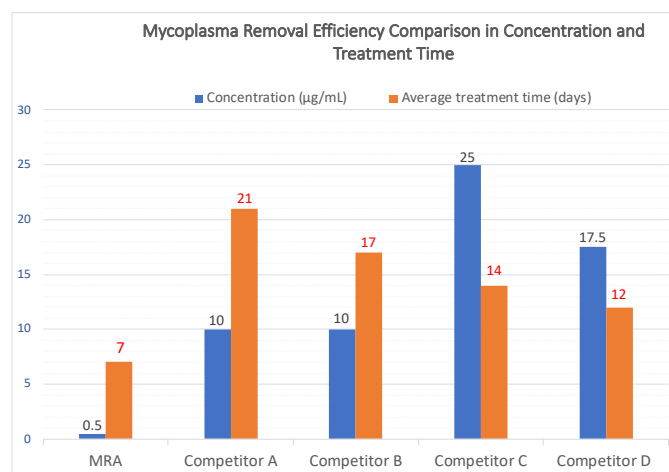
One of the major issues in mammalian cell culture is infection due to mycoplasma. These simple bacteria can infect the culture and alter a variety of cellular characteristics and functionalities (metabolism, morphology, proliferation etc.) often leading to experimental artifacts and cell loss. Therefore,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

Designed by the Hoechst method, our time-tested and trusted mycoplasma stain kit offers the following advantages:

- **Reliable** – Use of the Hoechst fluorescent stain method cited by the Tissue Culture Association (TCA procedure no. 75361)
- **Efficient** – It specifically and selectively binds to minor grooves of DNA
- **Versatile** – In situ detection of mycoplasma and other prokaryotic organisms
- **Rapid** – Takes less than 2 hours
- **Complete** – Stain, diluent, and mounting medium with controls included in the kit

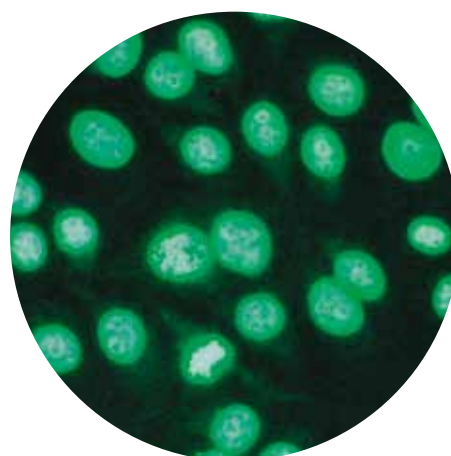
Once Mycoplasma has been detected, treat infected cell culture with Mycoplasma Removal Agent (MRA), the most reliable solution for mycoplasma removal and prevention, to ensure quality results (as shown in the following figure), including:

- **Eliminate multiple mycoplasma species within one week with the lowest dosage**
- **Prevent recontamination of the culture at 0.1 µg/mL**
- **Maintain cell viability**
- **Compatible with most mammalian cell lines**
- **Sterility and low cytotoxicity**
- **Citation and recognition in 550+ scientific publications**



Before Treatment

1 week at 0.5  
µg/mL MRA



After Treatment

Description	Size	Cat. No.
Mycoplasma Removal Agent	5 mL	093050044
Mycoplasma Stain Kit	1 kit (100 tests)	093030000
Mycoplasma Stain Kit	1 kit (20 tests)	093030001

# Cell Biology and Immunology Reagents

## Cell Culture Reagents

### *Cell Culture Growth Factors, Supplements, Proteins & Enzymes*

We offer a complete solution for your mammalian cell culture needs with an array of growth factors, supplements, proteins, and enzymes. From cell culture grade water and epidermal growth factors to high purity bovine albumin fraction V, we've got you covered. Visit us at [www.mpbio.com](http://www.mpbio.com) to find the products you need to nurture your cell cultures and propel your cancer research studies.

### *7X Cleaning Solution for Cell Culture, Labware, and Instruments*

Does your detergent leave behind residue like bacteria, microbial debris and fluorescence? Cited in over 8,000 scientific publications, 7X detergent from MP Bio has been highly recommended for use in a variety of applications, ranging from lab maintenance to industrial cell culture. Scientists, lab technicians, and biotechnologists around the world have been using this product for over 65 years to ensure a high degree of cleanliness necessary in any lab.

- Effective, water-soluble, and eco-friendly cleaning solutions with no etch to glass or plastic labware in any concentration
- Nontoxic for tissue and cell cultures
- Eliminate interfering fluorescence residues for flow cytometry
- No need for pH adjustment at any concentration
- Easy and safe to use, no gloves needed, gentle on skin
- Easy to store - 1 gallon of 7X concentrate can make up to 100 gallons cleaning solution

Description	Size	Cat. No.
7X Cleaning Solution	1 gal	097667093
7X Cleaning Solution	4 x 1 gal	097667094
7X-O-Matic Solution, Machine Wash	4 x 1 gal	097667494
ES 7X Cleaning Solution, Environment-Safe	4 x 1 gal	097667194
ES 7X Cleaning Solution, Environment-Safe	1 gal	097667193





## Cryopreservation Reagents for Cell Storage

Since cryopreservation requires an ultra-low temperature environment (-80 to -196 °C), it is essential to provide a safe, protective environment for cells and tissues during the freezing, storage and thawing process. However, it is always a challenge to improve cell viability while maintaining optimal cellular functions for cell cryopreservation. MP Bio has over 40 years of experience in manufacturing and supplying cell biology products to support the discovery and development of technologies in cancer research, stem cell biology and cell engineering by ensuring:

- Consistent high cell viability
- Serum-free and protein-free formulation
- Validated on many cells
- Long-term cell storage
- Balanced components for maintaining cellular functions
- Long shelf life

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

Particularly for short-term storage, as well as cell recovery from cryopreservation, we recently developed 2-8 CELLsium™, a cytoprotective, protein-free, ready to use biosolution for the short-term storage of cells or tissue. This product retains cell viability, but in a temporary senescent phase, which cannot be achieved using regular cell culture media.

Description	Cat. No.
2-8 CELLsium™ medium for short-term cell storage, 100 mL	092780349
2-8 CELLsium™ medium for short-term cell storage, 500 mL	092780354



# Cell Biology and Immunology Reagents

## Immunology Reagents

### Antibodies

MP Bio is a leading supplier of innovative immunological tools with the best quality and flexibility. Our collection of antibodies and sera are used for labeling, separation, and detection assays, including western blot, immunoprecipitation, immunostaining, and flow cytometry. Our comprehensive portfolio includes:

- Animal Sera
- Specialized Polyclonal Antibodies
- FITC-Conjugated Antibodies
- Monoclonal Antibodies
- Secondary Antibodies from Cappel™



Animal Sera advantages and features:

- High quality from healthy animals or donors
- Versatile for blocking or saturating nonspecific interactions
- Comprehensive collection from various species
  - Goat
  - Mouse
  - Sheep
  - Rat
  - Horse
  - Swine
  - Mouse
  - Bovine
  - Human
  - Hamster
  - Chicken
- Constant availability



**Specialized Polyclonal Antibodies** represent a population of antibodies that are produced by different B cell clones within the body by the immune response of an immunized animal. They are a collection of immunoglobulin molecules that react against a specific antigen, recognizing different epitopes within the antigen, and binding the antigen with varying affinities. With over 30 years of experience and expertise serving the antibody research community, MP Bio offers a large range of high quality specialized polyclonal antibodies with various host and targets, ensuring:

- Superior overall affinity to antigens
- Robust sensitivity of detection
- High tolerance to changes in pH or buffer
- Trusted quality and validated by thousands of scientific publications

Description	Cat. No.
Anti-Human Red Blood Cells from Rabbit IgG Fraction	0855042
Rabbit Antiserum to Human Red Blood Cells	0855133
Rabbit IgG Fraction To $\beta$ -Galactosidase	08559761
Rabbit anti-GFP	08687361
Goat IgG Fraction to Human Albumin	0855028
Rabbit IgG Fraction to Human Albumin	0855029
Anti-Glucagon Polyclonal from Rabbit	0811184

**FITC-Conjugated Goat IgG Fraction** – Due to its high absorptivity, excellent fluorescence quantum yield, and affordable pricing, fluorescein isothiocyanate (FITC) is among one of the most commonly used fluorescent dyes for flow cytometry, immunohistochemistry, and fluorescent immunoassays. High quality FITC-conjugated goat IgG fractions are designed to deliver optimal results, including:

- Highest affinity to the target molecule
- Lowest non-specific binding
- Outstanding fluorescence with optimal FITC conjugation
- No existence of Fc fragments

Description	Cat. No.
Fluorescein-Conjugated Goat IgG Fraction to Human Complement C1Q	0855166
Fluorescein-Conjugated Goat IgG Fraction to Human Complement C3	0855167
Fluorescein-Conjugated Goat IgG Fraction to Human Complement C4	0855168
Fluorescein-Conjugated Goat IgG Fraction to Human Fibrinogen	0855169
Fluorescein-Conjugated Goat IgG Fraction to Human IgG (Whole Molecule)	0855144
Fluorescein-Conjugated Goat IgG Fraction to Human IgM (5Fc $\mu$ )	0855153
Fluorescein-Conjugated Goat IgG Fraction to Human IgA (Alpha Chain)	0855077

**Monoclonal Antibodies to Actin and Tubulin** – Antibodies to cytoskeletal proteins are widely used for protein loading controls or specific studies such as apoptosis. MP Bio's antibodies to actin have demonstrated specificity directed towards all six known vertebrate isoactins. Our anti-tubulin monoclonal antibodies enable researchers to visualize microtubules in fixed cells and in fixed or frozen tissue sections from various species.

- Reacts with all known actins or tubulins
- Excellent positive control for western blots
- No known spurious reactivities

Description	Cat. No.
Monoclonal Antibody to Actin C4	08691001
	08691002
Monoclonal Anti-Alpha-Smooth Muscle Actin (Mouse Ascites Fluid), Clone 1A4	08637931
Mouse Anti-Actin Mab Clone B4	08691331
Actin, Purified from Rabbit (as antigen positive control)	08771012
$\alpha$ -Tubulin Monoclonal Antibody	08691251
$\beta$ -Tubulin Monoclonal Antibody	08691261

## Immunology Reagents

**Other Popular Monoclonal Antibodies** – MP Bio offers highly validated recombinant monoclonal antibodies against biomarkers and other popular targets, including human collagen. Our monoclonal antibodies are available in bulk quantities and demonstrate:

- High specificity and sensitivity to targets
- High reproducibility
- Minimal lot-to-lot variability

Description	Cat. No.
Mouse, Anti-GFP, Monoclonal Antibody	08687371
Mouse, Anti-Beta-Galactosidase, Purified Monoclonal Antibody	08633651
Monoclonal Mouse Anti-Chondroitin-4-Sulfate Antibody	08636511
Monoclonal Mouse Anti-Chondroitin-6-Sulfate Antibody	08636521
Mouse Anti-Synaptophysin IgG1 Monoclonal (Clone: SY38)	08697301
Mouse Anti-Glial Fibrillary Acidic Protein (GFAP) Monoclonal	08691101
Anti-Human Hemoglobin Monoclonal Antibody from Mouse	08634801
Anti-Human IgG Monoclonal Antibody from Mouse	08634811

**High Quality Secondary Antibodies from Cappel™** – Secondary antibodies are typically designed to bind to primary antibodies to amplify signals for detection, separation and quantification of the target antigen. To maximize signal, the secondary antibody must display specificity for interacting with the primary antibody species and isotype. In addition, a secondary antibody is often conjugated with a reporter molecule, such as an enzyme or fluorophore.

MP Bio offers a wide variety of secondary antibodies with or without enzyme/fluorescence dye conjugation from multiple immunoglobulins, including human, rabbit and mouse. Enzyme-conjugated antibodies (alkaline phosphatase (AP) or horseradish peroxidase (HRP)) are suitable for EIA, ELISA, blot immunostaining and cell/tissue staining. Fluorochrome-conjugated antibodies are used for immunofluorescence assays, cell/tissue staining, blot immunostaining, and fluorescence-activated cell sorting.

- High specificity for primary antibody species and isotypes
- Multiple pre-conjugations for sensitive detection
- Various fragments
- High purity
- Validated by thousands of publications since the 1960s

Visit [www.mpbio.com](http://www.mpbio.com) to view our large offering of antibodies to human, rat, and mouse immunoglobulins and find the antibody solutions tailored to your cancer research.

## Immunoassay Kits for Tumor Markers and Stress Research

### *Tumor Marker ELISA Kits for Cancer Research*

Liver, breast, intestinal, and pancreatic cancers, as well as common male and female reproductive cancers, have clinically significant tumor markers used to monitor disease progression. Enzyme immunoassays (EIAs) are the premium technology used for the quantitative determination of tumor markers including AFP, CA-125, CA 15-3, CA 19-9, CEA, PSA and free PSA.

Name	Cat. No.	Description
AFP ELISA Kit	07BC1009	Alpha-fetoprotein (AFP) is a glycoprotein with a molecular weight of approximately 70,000 Daltons. Elevation of serum AFP to abnormally high values occurs in several malignant diseases, most notably nonseminomatous testicular cancer and primary hepatocellular carcinoma.
Beta 2-Microglobulin ELISA Kit	07BC1061	Beta 2-Microglobulin ( $\beta$ 2-MG) is expressed by the nucleated cells of the body and in many tumor lines and is eliminated via the kidneys.
CA 125 ELISA Kit	07BC1013	Cancer Antigen 125 (CA 125) is a surface antigen associated with epithelial ovarian cancer. CA 125 may also be elevated in patients with lung, cervical, fallopian tube, and uterine cancer and endometriosis.
CA 15-3 ELISA Kit	07BC1015	CA 15-3 is a tumor marker used for the identification and diagnosis of breast cancers. In combination with CA-125, CA 15-3 has been shown to be useful in the early detection of ovarian cancer relapses. CA 15-3 levels are also increased in colon, lung and hepatic tumors.
CA 19-9 ELISA Kit	07BC1017	A group of mucin type glycoprotein Sialosyl Lewis Antigens (SLA), such as CA19-9 and CA19-5, have come to be recognized as circulating cancer associated antigens for gastrointestinal cancer. CA 19-9 represents the most important and basic carbohydrate tumor marker.
CEA ELISA Kit	07BC1011	Carcinoembryonic antigen (CEA) is a cell-surface 200-kD glycoprotein. Elevated levels of CEA are found in many cancers, including lung, liver, pancreas, breast, colon, head or neck, bladder, cervix, and prostate.
Free PSA ELISA Kit	07BC1021	Human Prostate Specific Antigen (PSA) is a 33 kD serine proteinase which, in human serum, is predominantly bound to alpha 1-antichymotrypsin (PSA-ACT) and alpha 2-macroglobulin (PSA-AMG). Measurement of free serum PSA in conjunction with total PSA can improve specificity of prostate cancer screening in select men with elevated total serum PSA levels.



# Cell Biology and Immunology Reagents

## Immunoassay Kits for Tumor Markers and Stress Research

### Immunoassays for Stress Research

Stress often leads to changes in the levels of many hormones in the body including glucocorticoids, catecholamines, growth hormones, and prolactin. MP Bio offers an array of assay kits for measuring these stress hormones, including our highly-cited Corticosterone RIA Kit.



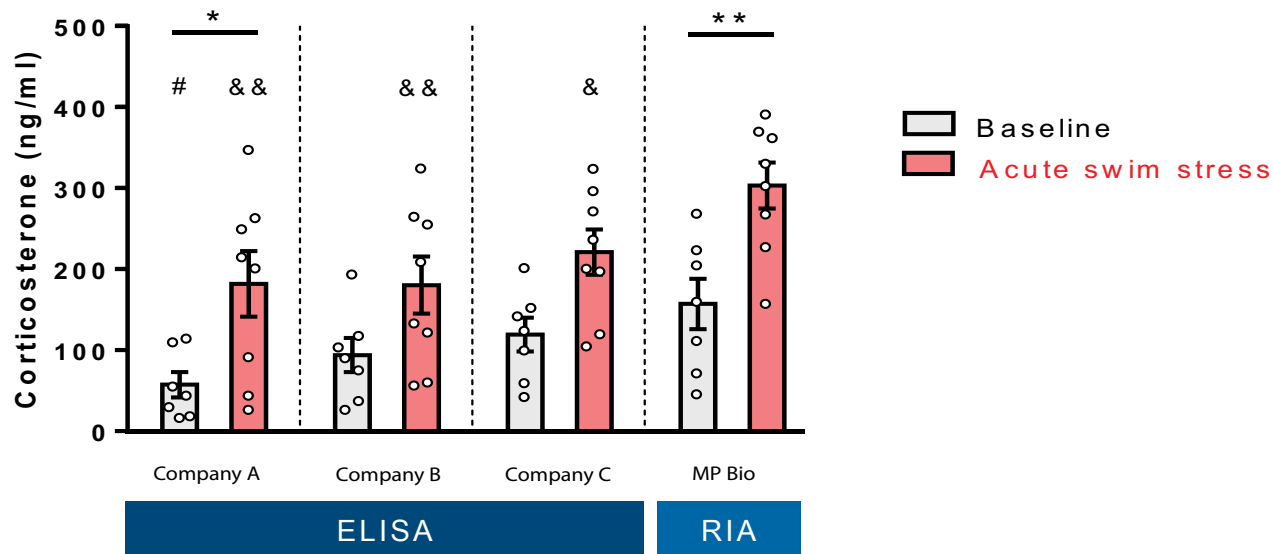
MP Bio Corticosterone RIA Kit advantages:



- Highly sensitive\*
- Simple and convenient compared with HPLC or GC-MS
- Flexible – Various animal model references (rodents, avian, marine, amphibian, reptiles, non-human primates and many more!)
  - Double antibody method able to accommodate different sample types
- Efficient – uses unextracted serum or plasma, no protein denaturation step required
- Outstanding reliability for decades – over 2,000 publications
- Unparalleled technical support to guide you through your assay

Size	Cat. No.
100 Tubes	07120102
200 Tubes	07120103

### MP Bio Corticosterone Radioimmunoassay Outperforms 3 ELISA Assays



## Additional Immunoassays for Stress Research:

Analyte	Assay Type	Sample Type	Tests	Cat. No.	Sample Vol.	Sensitivity	Species*
ACTH	RIA (DA)	Plasma	50	07106101	100 µL	5.7 pg/mL	Human
			100	07106102			
Corticosterone	EIA / ELISA	Serum or Plasma	96	07DE9922	10 µL	4.1 ng/mL	Rat, Mouse
	RIA (DA)		100	07120102		Inquire	
			200	07120103			
Cortisol	RIA	Serum, Plasma or Urine	100	06B256440	25 µL	0.07 µg/dL	Human
	RIA (CT)	Serum or Plasma	100	07221102	25 µL	0.17 µg/dL	
			500	07221105			
			1000	07221106			
	EIA / ELISA	Serum	96	07M21602		91.5 pg	
			2 x 96	07M21603			
ChLIA	Serum or Plasma	96	07M3675A	0.27 µg/dL			
Growth Hormone (GH)	RIA	Plasma, Tissue or Cell Culture	120	07RK551	100 µL	0.16 ng/tube	Rat
	ChLIA	Serum	96	07M1775A	50 µL	0.118 µIU/mL	Human
Prolactin	RIA	Plasma, Tissue or Cell Culture	120	07RK553	100 µL	0.07 ng/tube	Rat
	EIA / ELISA	Serum	96	07DE9944	25 µL	0.4 ng/mL	Canine
			96	07DE9966		0.6 ng/mL	Rat
	ChLIA		96	07M775A		0.8 ng/mL	Human
			192	07M775B			
2-CAT Fast Track [Adrenaline (Epinephrine) and Noradrenaline (Norepinephrine)]	EIA / ELISA	Plasma or Urine	2 x 96	07LE6500	10 or 300 µL	Adrenaline: 0.01 ng/mL plasma, 0.9 ng/mL urine Noradrenaline: 0.036 ng/mL plasma, 1.7 ng/mL urine	Human
		Urine	2 x 96	07LE7500	25 µL	Adrenaline: 0.5 ng/mL Noradrenaline: 1.7 ng/mL	
	RIA	Plasma or Urine	2 x 96	07LR6500	10 or 300 µL	Adrenaline: 19 pg/mL plasma, 0.39 ng/mL urine Noradrenaline: 42 pg/mL plasma, 1.1 ng/mL urine	
3-CAT Fast Track [Adrenaline (Epinephrine), Noradrenaline (Norepinephrine) and Dopamine]	EIA / ELISA	Plasma or Urine	3 x 96	07LE6600	10 or 300 µL	Adrenaline: 0.01 ng/mL plasma, 0.9 ng/mL urine Noradrenaline: 0.036 ng/mL plasma, 1.7 ng/mL urine Dopamine: 0.049 ng/mL plasma, 2.5 ng/mL urine	Human
		Urine	3 x 96	07LE7600	25 µL	Adrenaline: 0.5 ng/mL Noradrenaline: 1.7 ng/mL Dopamine: 3 ng/mL	
	RIA	Plasma or Urine	100	07LR6600	10 µL for Urine 300 µL for Plasma	Adrenaline: 0.01 ng/mL plasma, 0.3 ng/mL urine Noradrenaline: 0.05 ng/mL plasma, 1.5 ng/mL urine Dopamine: 0.02 ng/mL plasma, 4.5 ng/mL urine	
Adrenaline Fast Track	EIA / ELISA	Plasma or Urine	96	07LE6100	10 or 300 µL	Plasma: 0.01 ng/mL Urine: 0.9 ng/mL	Human
Adrenaline	EIA / ELISA	Urine	96	07LE7100	25 µL	0.5 ng/mL	Human
Dopamine Fast Track	EIA / ELISA	Plasma or Urine	96	07LE6300	10 or 300 µL	Plasma: 0.049 ng/mL Urine: 2.5 ng/mL	Human
		Urine	96	07LE7300	25 µL	3 ng/mL	
	RIA	Plasma or Urine	96	07LR6300	10 or 300 µL	Plasma: 29 pg/mL Urine: 3.0 ng/mL	
Noradrenaline (Norepinephrine) Fast Track	EIA / ELISA	Plasma or Urine	96	07LE6200	10 or 300 µL	Plasma: 0.036 ng/mL Urine: 1.7 ng/mL	Human
		Urine	96	07LE7200	25 µL	1.7 ng/mL	
	RIA	Plasma or Urine	100	07LR6200	10 or 300 µL	Plasma: 42 pg/mL Urine: 1.1 ng/mL	

\*Other species have been cited in scientific publications. All kits are available for research use. Some kits may be cleared for IVD use. Contact us for more information.  
CT = coated tube DA = double antibody

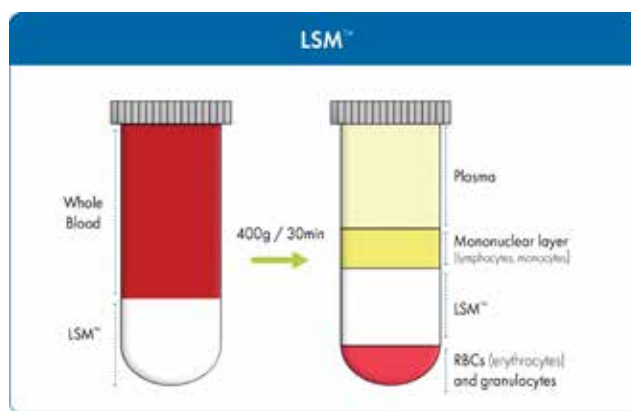
## Additional Cell Biology and Immunological Tools

### Lymphocyte Separation Media

Blood is composed of several cell types that need to be routinely isolated, such as monocytes, lymphocytes, and polymorphonuclear leukocytes. Isolation of mononuclear and polymorphonuclear cells from blood serves as the starting point for a wide spectrum of immunology studies. One pain point for many researchers is how to specifically isolate mononuclear and polymorphonuclear cells from blood with high yield and cell viability. MP Bio offers three products for the isolation of mononuclear and polymorphonuclear cells from human peripheral blood, bone marrow, and umbilical cord blood. Lymphocyte Separation Medium (LSM™), LymphoSep®, and Mono-Poly® Resolving Medium have been used for many applications by researchers worldwide.

**Mononuclear Cell Isolation for Research Use** – Lymphocyte Separation Medium (LSM™) is a legendary tool to separate lymphocytes from human peripheral blood as well as bone marrow, and umbilical cord blood. As proven by more than 2,200 scientific publications, it ensures:

- Maximum yield of monocytes
- > 96% cell viability of lymphocytes
- Easy and fast one-step centrifugation
- Low endotoxin levels
- Sterility



### Lymphocyte Separation for in vitro diagnostics –

LymphoSep® lymphocyte separation medium from MP Bio is based on the original Bøyum formulation with a density of 1.077 g/mL. It is validated for in vitro diagnostic (IVD) usage and has designation as an FDA class I exempt medical device for lymphocyte separation (21CFR864.8500). It offers similar product features to our Lymphocyte Separation Medium (LSM™), but it is specifically designed for in vitro diagnostics use.

**Mononuclear and Polymorphonuclear Isolation in One Step** – When it is necessary to separate both mononuclear and polymorphonuclear cells from blood, Mono-Poly™ Resolving Medium (Mono-Poly™, M-PRM) may be used. Differential migration during centrifugation allows for the resolution of both mononuclear and polymorphonuclear leukocytes into two distinct bands that are relatively free of erythrocytes. This can be performed in a one-step centrifugation process.

Description	Size	Cat. No.
LSM™ - Lymphocyte Separation Medium	5 x 100 mL	0850494
LymphoSep®	500 mL	091692254
Mono-Poly® Resolving Medium	100 mL	091698049

### Accutase™ Cell Detachment Solution (091000449)

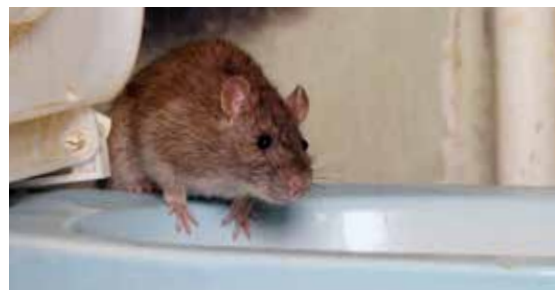
Accutase solution is a novel trypsin replacement that exhibits both protease and collagenolytic activities while maintaining most cell surface antigens. Accutase cell detachment solution is effective in detaching primary fibroblasts, endothelial cells, neurons, tumor cell lines, and insect cells. It performs exceptionally well in detaching cells for analysis of cell surface markers, virus growth assay, and flow cytometry as well as bioreactor scale-up.

## Dextran Sulfate Sodium (DSS) and Azoxymethane (AOM) for Autoimmunity and Colorectal Cancer Research

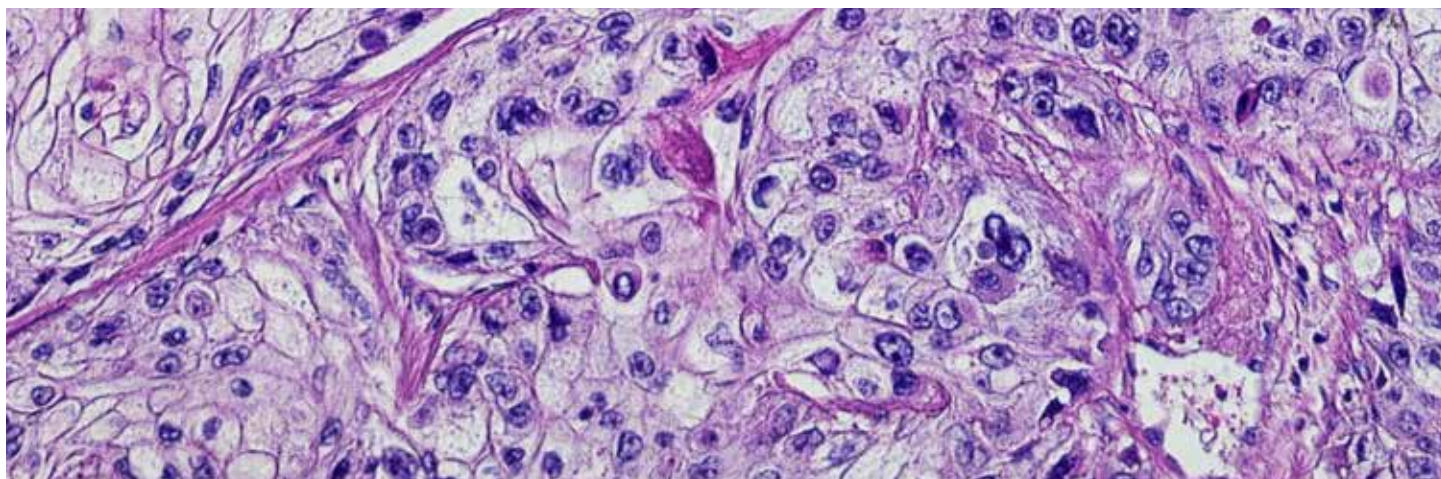
Inflammatory Bowel Disease (IBD) is characterized by chronic and relapsing inflammation of the gastrointestinal tract which is associated with increased risk of developing colitis-associated cancer. Several animal models have been used to study colitis and one such model involves the oral administration of dextran sulfate sodium salt (DSS) in the drinking water of mice leading to chronic colitis. Colitis-grade DSS from MP Bio has been validated by over 3,000 scientific publications and is the superior product available in the market for potency and reproducibility.

Azoxymethane (AOM) is a carcinogen that induces O6-methylguanine adducts in DNA leading to G → A transitions. AOM is most commonly used for cancer research by inducing tumorigenesis in the colon of laboratory animals to further study the mechanisms of cancer progression and chemoprevention. Combining AOM with DSS induces colonic tumors, providing a method for generating colitis-related carcinogenesis in mouse models. This method has proven to be:

- Fast and efficient
- Reproducible
- Potent
- Easy to use



Description	Size	Cat. No.
Dextran Sulfate Sodium Salt (36,000 – 50,000 Da)	1 g	0216011001
	10 g	0216011010
	25 g	0216011025
	50 g	0216011050
	100 g	0216011080
	500 g	0216011090
	1 kg	0216011091
Azoxymethane	100 mg	02180139.1
	25 mg	02180139.3



# Biochemical Reagents for Cancer Research

## Antineoplastic Agents

Antineoplastic agents are compounds that inhibit the maturation and proliferation of malignant cells by impeding cancerous tumor growth and/or by destroying the tumorous material. Antineoplastic therapy is aimed at the destruction of malignant cells using a variety of reagents that directly affect cellular growth and development. These reagents and drugs may be classified into several main groups: Alkylating Agents, Antimetabolites, Antitumor Antibiotics, Alkaloids, and Antihormones.

**Alkylating Agents** are nonhormonal compounds capable of damaging cellular DNA by reacting with electron-rich atoms to form covalent bonds. This process interferes with cellular replication and can occur during any phase of the cell cycle.

**Antimetabolites** are compounds that interfere with cancer cell metabolism and are specific for the S phase of the cell cycle. They act by competing with, replacing, or inhibiting specific cell metabolites. Antimetabolites disrupt cellular function and can inhibit the manufacture of proteins in the cell.

**Antitumor Antibiotics** are agents that have been isolated from microorganisms and affect the function and/or synthesis of nucleic acids. These cell cycle nonspecific reagents bind with DNA to inhibit RNA synthesis and prevent the cells from manufacturing proteins.

**Alkaloids** induce apoptosis in tumor cells by targeting protein synthesis or DNA replication. These reagents are most effective during the S- and M- phases, making them cell cycle specific.

**Antihormones** are used to create an unfavorable environment for cancer cell growth by blocking the production or action of a hormone.

Presented below is a select sample of our many antineoplastic and antitumor agents.

Visit us at [www.mpbio.com](http://www.mpbio.com) for the most recent additions and complete up-to-date listings and prices.

Reagent	Cat. No.	Classification	Description
Cyclophosphamide monohydrate	02150749	Alkylating Agent	Induces DNA damage and inhibits DNA repair and replication
5-Fluorouracil	02101722	Antimetabolite	Inhibits thymidylate synthetase and induces p53 dependent apoptosis
Methotrexate (USP Grade)	02102299	Antimetabolite	Inhibitor of dihydrofolate reductase
Methotrexate (USP and EP Grade)	02199855		
Bleomycin Sulfate	02190306	Antitumor Antibiotic	Binds to DNA and causes ssDNA scission at specific base sequences, thus inhibiting DNA synthesis
Mitomycin C Cell Culture Reagent	02194532	Antitumor Antibiotic	Inhibits DNA synthesis, nuclear division, and cancer cells
Mitomycin C Antibiotic Class	02100498		
Streptozotocin Purity > 98%	02100557	Antitumor Antibiotic	Glucosamine-nitrosourea compound and DNA alkylating and methylating agent; particularly toxic to pancreatic islet insulin-producing $\beta$ -cells
Streptozotocin Purity > 97%	02183805		
Camptothecin	02159732	Antitumor Antibiotic	Topoisomerase inhibitor capable of blocking the cell cycle in S-phase
Doxorubicin Hydrochloride	02159101	Antitumor Antibiotic	Chemotherapeutic, antitumor, immunosuppressive, and antibiotic agent
Vinblastine Sulfate	02190287	Alkaloid	Anti-tumor plant alkaloid that inhibits microtubule assembly
Vincristine Sulfate	02190687	Alkaloid	Anticancer agent, microtubule disrupter, and apoptosis inducer in human lymphoma cells
Etoposide	02193918	Alkaloid	Chemotherapeutic agent targeting topoisomerase II and used to treat a wide spectrum of human cancers
Tamoxifen	02156738	Antihormone	Protein kinase C inhibitor that induces apoptosis in human malignant glioma cell lines; blocks estradiol-stimulated VEGF production in breast tumor cells
Tamoxifen Citrate Salt	02156739		





## Angiogenesis Modulators

Angiogenesis, especially in tumors, is induced by hypoxia. This process leads to expression and stabilization of HIF-1 $\alpha$ , a transcription factor that responds to changing oxygen levels, and consequently, the transcription of angiogenesis-promoting genes. As a result, pro-angiogenic factors, such as VEGF, PDGF, FGF or TGF- $\beta$  are upregulated and activate signaling pathways, such as PI3K/Akt, Erk1/2, Smad and Notch. This causes endothelial cell proliferation and migration of the pre-existing vasculature to sprout and increase vascularization of the tissue. Extensive research continues on anti-angiogenic therapies that combat cancer by preventing access to the blood supply that is critical for tumor growth and survival.



Reagent	Cat. No.	Description
(-)-Epigallocatechin gallate	02196064	A urokinase-plasminogen activator (uPA) inhibitor that promotes cell cycle arrest
17-DMAG	02183697	A less toxic, more potent synthetic derivative of geldanamycin; Angiogenesis inhibitor
Genistein	02183827	Down-regulates the transcription of genes involved in controlling angiogenesis; Cell-permeable, reversible, substrate competitive tyrosine kinase inhibitor

## Small Molecule Inhibitors

**Ubiquitin Inhibitors** - The ubiquitin-proteasome system (UPS) and the autophagic-lysosomal pathway degrade both native and misfolded proteins in eukaryotic cells. This proteolysis is regulated by the 26S proteasome complex, consisting of the 19S regulatory cap and the 20S proteasome core. Eukaryotic 20S proteasomes harbor seven different  $\beta$ -subunits stacked complexes, but only three of these subunits are proteolytically active. These three  $\beta$ -subunits are major targets for small molecule proteasome inhibitors and have implications relevant to cancer research.

### Lactacystin

0219586380 100  $\mu$ g | 200  $\mu$ g | 500  $\mu$ g | 1 mg

**Formula:** C<sub>15</sub>H<sub>24</sub>N<sub>2</sub>O<sub>7</sub>S

**MW:** 376.4

**Source:** *Streptomyces lactacystinaceus*

Potent and selective irreversible proteasome inhibitor.  
Specifically inhibits 20S proteasome.

### Salinosporamide A

0218344380 100  $\mu$ g

**Formula:** C<sub>15</sub>H<sub>20</sub>ClNO<sub>4</sub>

**MW:** 313.8

**Source:** *Salinosporea tropica*

Inhibits all three catalytic activities:  
chymotrypsin-like (EC<sub>50</sub> = 3.5 nM);  
trypsin-like (EC<sub>50</sub> = 28 nM); caspase-like (EC<sub>50</sub> = 430 nM).

**Potent 20S Proteasome Inhibitor**

Reagent	Cat. No.	Description
Bortezomib	02183859	A selective and reversible cell permeable inhibitor of the proteasome. Inhibits the chymotrypsin-like and caspase-like peptidase activity of the proteasome.
Z-Leu-Leu-Leu-CHO [MG-132]	02180411	Induces cell cycle arrest and activates apoptosis in various cancer cell lines. Blocks degradation of short-lived proteins.

## Small Molecule Inhibitors

**H<sup>+</sup>-V-ATPase Inhibitors** - Vacuolar-type H<sup>+</sup>-ATPase (V-ATPase) is a multi-subunit enzyme responsible for acidification of eukaryotic intracellular organelles. Inhibition of the vacuolar H<sup>+</sup>-ATPase reduces delivery of internalized molecules from mature multivesicular endosomes to lysosomes in some cancer cell lines.

### Bafilomycin A<sub>1</sub> (high purity)

02183872.1 100 µg | 1 mg

Formula: C<sub>35</sub>H<sub>58</sub>O<sub>9</sub>

MW: 622.8

Source: *Streptomyces griseus*

Specific vacuolar-type H<sup>+</sup>-ATPase inhibitor.  
Distinguishes among different types of ATPases.

### Concanamycin A (high purity)

0219415825 25 µg | 100 µg | 1 mg

Formula: C<sub>46</sub>H<sub>75</sub>NO<sub>14</sub>

MW: 866.1

Source: *Streptomyces* sp.

Potent and specific H<sup>+</sup>-ATPase inhibitor.

**PI3K Inhibitors and mTOR Modulators** - The PI3K-AKT-mTOR pathway controls many cellular processes that are important for the formation and progression of cancer including apoptosis and cell cycle progression. Alterations along the pathway are common in pre-cancerous and cancerous lesions. Because of this link, the pathway is a common target for cancer research and therapeutics.

### Rapamycin

02183800.1 100 µg | 1 mg | 5 mg | 25 mg

Formula: C<sub>51</sub>H<sub>79</sub>NO<sub>13</sub>

MW: 914.2

Source: *Streptomyces hygroscopicus*

Antitumor compound. Forms a complex with FKBP12 and inhibits the mammalian target of rapamycin (mTOR). Potent immunosuppressant used as an alternative to calcineurin inhibitors.

### Wortmannin

0218379901 1 mg | 5 mg | 25 mg

Formula: C<sub>23</sub>H<sub>24</sub>O<sub>8</sub>

MW: 428.4

Antitumor compound. Potent cell permeable and selective inhibitor of phosphatidylinositol 3-kinase (PI3K). Shows similar potency *in vitro* for the class I, II, and III PI3K.

### 3-Methyladenine

0215545925 25 mg | 100 mg | 250 mg

Formula: C<sub>6</sub>H<sub>7</sub>N<sub>5</sub>

MW: 149.2

Antitumor compound. Blocks class I, class II and class III PI3Ks, including some downstream targets. Blocks class I PI3K persistently and class III PI3K transiently.

## Additional Cancer Research Reagents

<b>Aphidicolin</b> 02183873	<b>Eupatilin</b> 02183435	<b>Heptelidic acid</b> 02183371	<b>Fumitremorgin C</b> 02183683
<p>A cell permeable reversible inhibitor of DNA replication</p> <p>Blocks DNA polymerases and arrests cells in G1/S phase of cell cycle</p>	<p>Anti-oxidative and anti-tumor O-methylated flavone</p> <p>Induces apoptosis and cell cycle arrest at G2/M phase in human melanoma cells</p>	<p>An irreversible inhibitor of DAPDH enzyme</p> <p>Selectively induces apoptosis in high glycolytic cancer cells</p>	<p>A specific inhibitor of breast cancer resistance protein</p> <p>Reverses multidrug resistance in cancer cells that overexpress breast cancer resistance protein</p>
<b>Nocodazole</b> 02152405	<b><math>\alpha</math>-Galactosylceramide</b> 02183316	<b>Actinonin</b> 02183817	<b>PMA</b> 02183882
<p>Stimulates the intrinsic GTPase activity of tubulin</p> <p>Activates the JNK/SAPK signaling pathway and induces apoptosis in several normal and tumor cell lines</p>	<p>Stimulates lymphocyte proliferation and enhances antibody production</p> <p>Displays antiangiogenic, antitumor and potent immunoregulatory effects <i>in vivo</i></p>	<p>An irreversible inhibitor leucine aminopeptidase</p> <p>Inhibits tumor cell invasion and matrix degradation; induces apoptosis in animal models</p>	<p>An activator of protein kinase C</p> <p>PMA at high concentrations downregulates kinase activity and is tumorigenic</p>

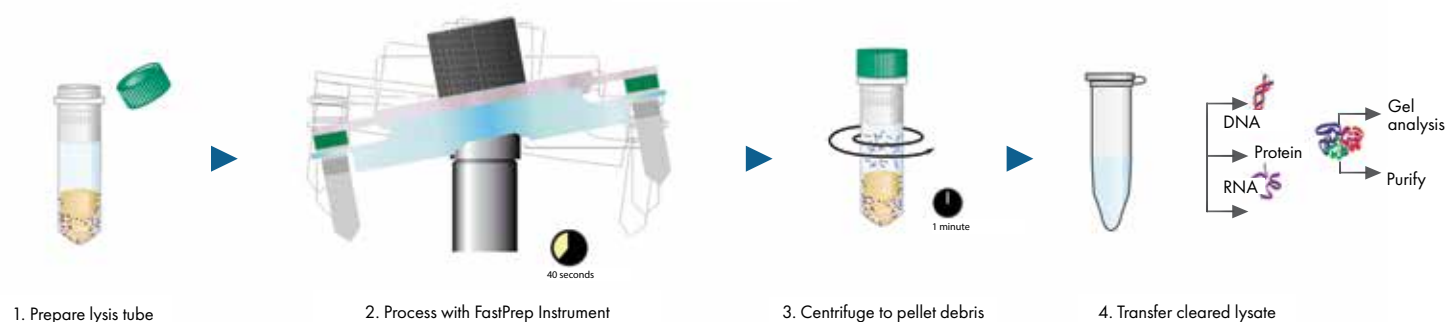
# Sample Preparation and Molecular Biology Products

MP Bio, the leader in sample preparation, provides a complete range of high-quality products for all steps of your research experiments. The product range includes sample homogenization and lysis tools, DNA and RNA extraction and purification kits, PCR enzymes and mastermixes, as well as transformation kits, gel electrophoresis, and hybridization products.

## Tissue Homogenization and Cell Culture Lysis

The FastPrep® system is a comprehensive laboratory solution that optimizes the lysis, grinding, or homogenization process from virtually any sample type. Mechanical lysis disrupts cells and tissues for the isolation of DNA, RNA, proteins, metabolites, and other small molecules, and eliminates the need for chemicals, enzymes, and detergents, which can inhibit some downstream processes. FastPrep instruments, Lysing Matrix tubes, and kits work together to deliver rapid, consistent, and efficient lysis and homogenization, resulting in high yields of purified nucleic acid or protein. The FastPrep system is ideal for homogenization of soft and hard animal tissues and tumors, as well as lysis of mammalian cells from cultures.

### FastPrep Workflow



### FastPrep-24™ 5G

A benchtop instrument based on bead-beating technology, the FastPrep-24™ 5G is a versatile sample disruption device providing the ultimate in speed and performance for the lysis of biological samples. A self-contained system, the FastPrep-24™ 5G eliminates the risk of cross-contamination and time-consuming clean-up associated with manual lysis methods. The instrument provides complete and quantitative lysis of difficult and routine samples and is suitable in all applications that require grinding, lysing, or homogenization.

- Consistent results
- Interchangeable sample tube holders for flexibility in sample size and cryogenic lysis capability
- High reproducibility with precise setting of lysis time and speed
- Easy touch screen user interface
- Power to homogenize resistant samples with ease
- High Yields

Description	Cat. No.
FastPrep-24™ 5G instrument	116005500



### FastPrep-96™

The FastPrep-96™ delivers superior performance, speed, and reproducibility with high-throughput capabilities – process up to 192 samples simultaneously in 2 x 96 deep well plates. MP Bio's high-throughput device offers exceptional versatility with interchangeable sample holders and fast processing speeds. The true linear motion of FastPrep-96™ eliminates the need to re-orient plates mid-cycle.

Description	Cat. No.
FastPrep-96™ instrument	116010500



### Lysing Matrix

FastPrep Lysing Matrix makes difficult-to-lyse samples easy. No matter how tough or resistant your samples, our bead beating tubes will effectively disrupt cell walls, providing the highest yields of nucleic acids and proteins in a matter of seconds. Lysing Matrix tubes from MP Bio are extremely reproducible and help prevent cross-contamination. All Lysing Matrix tubes are standard sizes and fit just about any homogenizer on the market. We offer a wide variety of lysing beads and matrices to fit all sample types and applications.

We recommend the following Lysing Matrix for sample types commonly used in cancer research applications:

Sample Category	Sample Type	Lysing Matrix
Soft Animal & Human Tissues	Lung, Breast, Kidney, Heart, Intestine, Muscle, Spleen, Liver, Brain	A, D, S, SS, Z
Unique Animal & Human Tissues	Skin	A, D
	Nail	S
	Tail, Ear	A, S
	Vascular Tissue	A, D, Z
	Hair	S
	Bone	A, K, M, S, SS
	Tumor	A, S
Cultures	Mammalian Cells	A, D, Z



## DNA Isolation and Purification Kits

MP Bio provides high performance kits for the isolation of DNA, RNA, and proteins. Choose from a selection of FastDNA™, FastRNA™, and FastProtein™ kits for isolating nucleic acid or protein from animal or human tissue samples, tumors, or cell cultures. Eluted gDNA, RNA, or proteins are suitable for downstream applications including digestion, electrophoresis, PCR, RT-PCR, gene expression, qPCR, microarray, SDS-PAGE, western blotting, immunoprecipitation, gel mobility shift assays, and enzyme activity analysis.



Type	Kit	Cat. No.	Sample
DNA	FastDNA	116540400	Animal Tissues, Cultured Cells
	FastDNA Spin	116540600	Animal Tissues, Cultured Cells
	FastDNA Spin for Feces	116570200	Feces
	FastDNA Spin for Plant and Animal Tissue	116540800	Animal Tissues
	FastDNA-96 Tissue and Insect DNA	119696500	Animal Tissues
	FastDNA-96 Fecal DNA	119696400	Feces
RNA	FastRNA Pro Green	116045050	Animal Tissues, Cultured Cells
Glycoprotein	FastGlycoProtein Isolation Kit ConA Resin	116550800	Animal Tissues, Cultured Cells, Serum
	FastGlycoProtein Isolation Kit WGA Resin	116550900	Animal Tissues, Cultured Cells, Serum

## Automated Nucleic Acid Purification Platform

Save time, increase reproducibility, and be cost effective. The MPure-12™ is a bench-top automated system for rapid purification of nucleic acids from a wide variety of biospecimens, including tissues, cultured cells, blood, and FFPE samples. Combined with a uniquely designed magnetic bead processing chamber, the fully integrated and easy-to-use pre-packaged reagent kits offer superior yields of nucleic acids and high-quality results at an affordable price.

- Fully automated and integrated platform that offers cost and time savings
- Reproducibility, lot-to-lot consistency, scalability, ease-of-use and convenience
- Highest quality and yield of DNA & RNA for downstream applications
- No cross-contamination of samples due to the unique platform design



Product Name	Cat. No.	Description
MPure-12™ system	117002200	Fully automated platform for isolation of up to 12 nucleic acid samples
MPure Blood DNA Extraction Kit	117022100 117022200	Purification of genomic DNA from mammalian whole blood, peripheral blood mononuclear cells, buffy coat
MPure Tissue DNA Extraction Kit	117022400	Purification of genomic DNA from a variety of animal tissues, swabs and blood stains
MPure Cultured Cell DNA Extraction Kit	117022500	Purification of genomic DNA from cultured cells
MPure FFPE DNA Extraction Kit	117022900	Purification of genomic DNA from formalin fixed, paraffin-embedded tissue (FFPE) samples
MPure Total RNA Extraction Kit	117022160	Purification of total RNA from a variety of sample types

## PCR Enzymes and Mastermixes

MP Bio is an established manufacturer of PCR polymerases for over 20 years. Obtain reproducible and consistent PCR results with thermostable and high-quality PCR enzymes and mastermixes covering requirements for general PCR, hot-start, high-fidelity, multiplex PCR and real-time PCR. For superior RT-PCR results, MP Bio offers the cDNA Synthesis & Go kit engineered to provide high performance even with challenging RNA samples. Our complete line of real-time PCR reagents are developed for fast, highly sensitive, and reproducible amplification on all qPCR platforms.

Select products for downstream applications:

Category	Name	Cat. No.
Routine PCR	Taq DNA Pol (5 U/ $\mu$ L)	11EPTQA025
	Taq & GO Mastermix	11EPTAG100
	Taq & LOAD Mastermix	11EPTAL100
High-Fidelity PCR	ISIS DNA Polymerase	11EPSIS100
Hot-Start PCR	SurePRIME DNA Polymerase	11EPHSP025
Multiplex PCR	Q-Bio Taq Pol (5 U/ $\mu$ L)	11EPQBT010
qPCR	qPCR & Go SYBR® High-ROX Kit	11EBI01050
	qPCR & Go SYBR® Low-ROX Kit	11EBI02050
	qPCR & Go SYBR® No-ROX Kit	11EBI03050
	qPCR & Go Probe High-ROX Kit	11EBI04050
	qPCR & Go Probe Low-ROX Kit	11EBI05050
	qPCR & Go Probe No-ROX Kit	11EBI06050
cDNA Synthesis	cDNA Synthesis & Go Kit	11EBI00005



# Sample Preparation and Molecular Biology Products

## Electrophoresis

MP Bio is your source for quick, economical electrophoresis products. In addition to molecular biology grade buffers and reagents, we also supply high quality agaroses for routine and rapid separation of DNA and RNA fragments.

Why use MP Bio's agaroses?

- Highest quality and purity
- Certified molecular biology grade
- High resolution gels
- Lack of inhibitors to restrict enzymes
- Efficient Southern and Northern transfers

Description	Size	Cat. No.
Basic Agarose Premier	500 g	11AGAF0500
Agarose Standard Low EEO	500 g	11AGAH0500
Agarose Low Melting Point	50 g	11AGAL0050
Agarose, High Resolution	50 g	11AGAR0050

## DNA Purification from PCR Reactions and Agarose Gels

GENECLEAN® kits are a proven technology for DNA purification from PCR reactions and agarose gels. Patented GENECLEAN® technology simplifies the process of purifying DNA into three easy steps: BIND, WASH and ELUTE. Ethanol precipitation is never required.

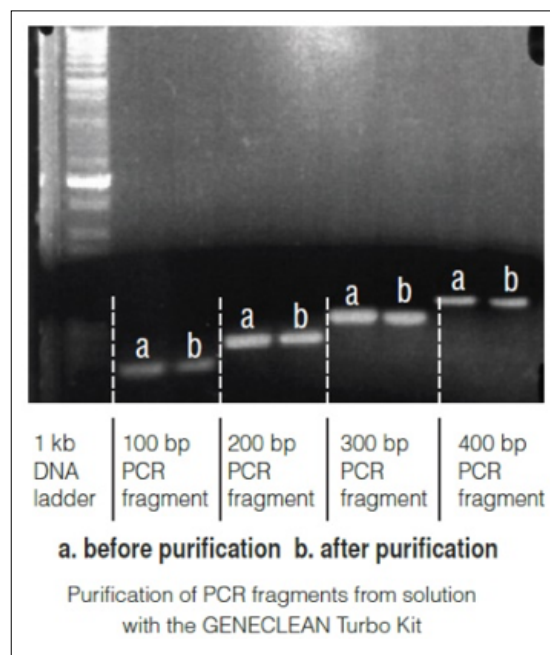
### GENECLEAN® Turbo Kits

GENECLEAN® Turbo Kits use a GENECLEAN® Turbo Cartridge system designed to simplify the purification process.

This system contains a special silica embedded membrane and buffer system optimized for the purification of DNA.

Benefit from the many advantages offered by these kits:

- High column capacity – binds up to 10 µg of DNA
- High yields – DNA recovery is up to 95%
- Fast – 12 samples are processed in 15 minutes
- Effective – purified DNA performs well in downstream applications
- Complete – kits contain all columns and solutions required



**GENECLEAN® Turbo for PCR Kit** – For purification of PCR products ranging from 100 bp to 10 kb

Description	Size	Cat. No.
GENECLEAN® Turbo for PCR Kit	50 preps	111103200
	100 preps	111103400
	300 preps	111103600

**GENECLEAN® Turbo Kit** – For purification of DNA fragments from 100 bp to 300 kb from TAE or TBE buffered agarose gels or solutions

Description	Size	Cat. No.
GENECLEAN® Turbo Kit	50 preps	111102200
	100 preps	111102400
	300 preps	111102600

### **GENECLEAN® SPIN Kit**

For purification of DNA fragments from 200 bp to 300 kb from TAE or TBE buffered gels or solutions.

The GENECLEAN® SPIN Kit includes a bulk slurry form of the patented silica matrix that allows for customization and flexibility with respect to the scale of purification required and spin filters whose usage prevents silica particle carry-over into cleaned DNA.

Description	Size	Cat. No.
GENECLEAN® SPIN Kit	50 preps	111101200
	100 preps	111101400
	300 preps	111101600





## One Source. One Call. World of Cancer Research Reagents.

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

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e-mail: mgp@mgpslov.sk

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