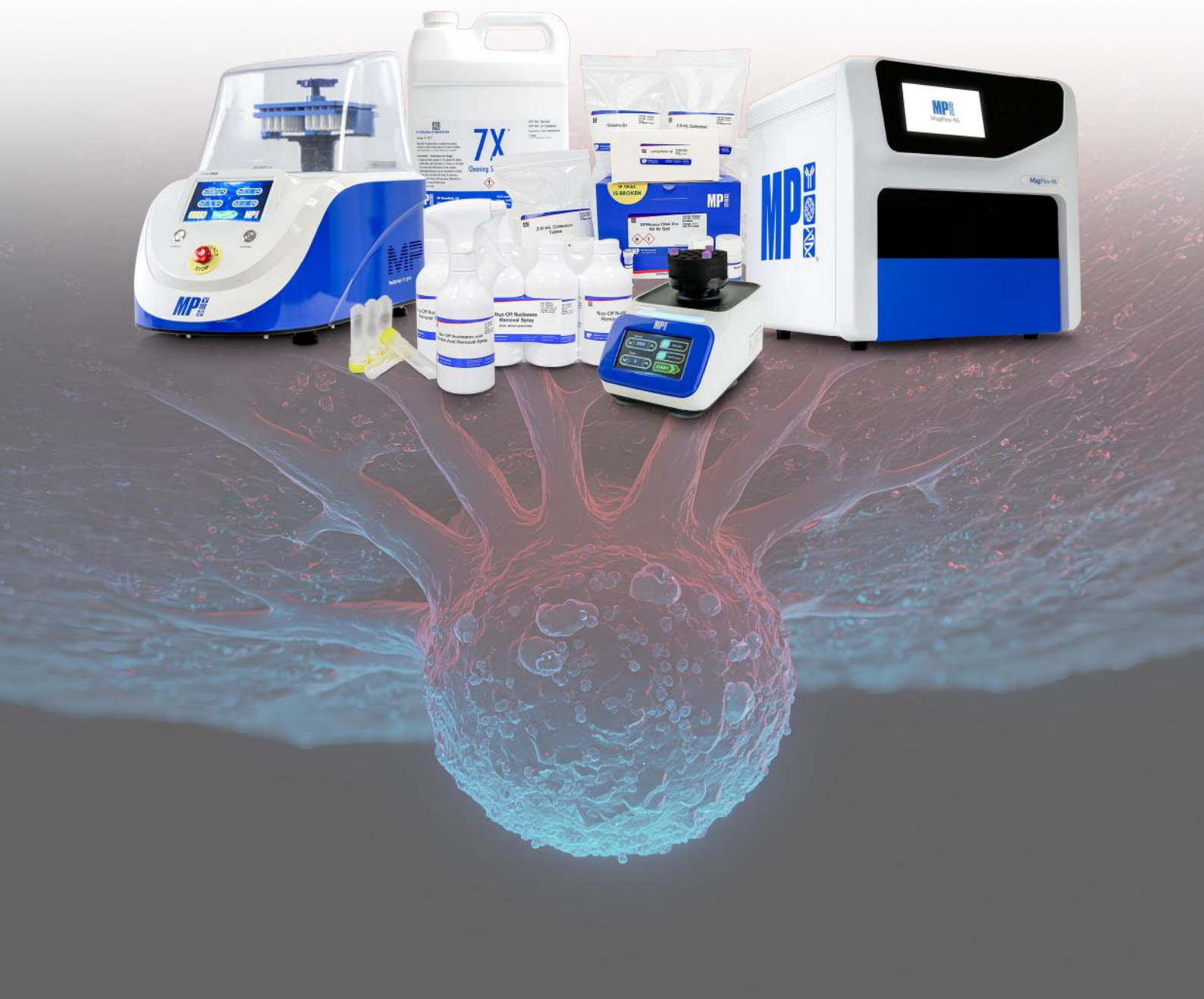
Reagents and Kits for
CANCER RESEARCH

MPPCAT-CR202509-05

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 Biomedicals 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.



Cell Biology and Immunology Reagents

Biochemical Reagents for Cancer Research

Sample Preparation and Molecular Biology Products

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.

FastGro™ *(Cat. No: 092640049)* 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
- Eliminates risk of contaminants – viruses, mycoplasma, prions, etc.
- Suitable for a wide range of cell types
- No thawing necessary - storage in the refrigerator

Recommended Growth Factors and Hormones for Primary Cell Cultures Using FastGro:

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 µg/mL	optimal/beneficial
	bFGF (human, recombinant)		5 µg/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™ supports long-term culturing of human cells.

- Chemically defined
- Free of biological variability
- Free of growth factors or steroid hormones
- Supports long-term culture with no chromosomal or morphological changes
- Compatible with all basic cell culture media
- Low endotoxin levels
- 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 (DMEM) (1X Solution) With 4.5 g/L Dextrose, Without L-Glutamine and Inositol	091642954
Dulbecco's Modification of Eagle's Medium (DMEM) (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
William's Medium E, Powder, With L-Glutamine, Without Sodium Bicarbonate	091050122

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	Size	Cat. No.
Amphotericin B, 250 µg/mL (Fungizone)	20 mL	091672346
	50 mL	091672348
Gentamicin Sulfate Solution, 10 mg/mL	10 mL	091676045
	10 x 10mL	0916760J8

Description	Size	Cat. No.
Gentamicin Reagent Solution, 50 mg/mL	10 mL	091676245
	10 x 10mL	0916762J8
G418 Sulfate, 50 mg/mL (Geneticin)	20 mL	091672546
	50 mL	091672548
Kanamycin Sulfate, 5 mg/mL	50 mL	091672048
Penicillin-Streptomycin (10,000 IU/mL, 10 mg/mL)	100 mL	091670249
Penicllin-Streptomycin-Amphotericin B (100X)	100 mL	091674049

Animal Sera

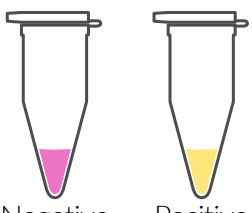
Animal serum has been widely used as a nutrient boost for most cell-culture applications in the life sciences. Fetal bovine serum (FBS) is one of the most highly implemented serum supplements for in vitro cell culture. Our heat-inactivated CELLect FBS Gold is the industry standard for FBS supplements 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, Removal & Prevention

The **Myco-Visible Mycoplasma LAMP Detection Kit** reveals contamination with speed and precision. This advanced assay leverages Loop-Mediated Isothermal Amplification (LAMP) to target the conserved 16S rRNA region of the mycoplasma genome, detecting as few as 10 16S rRNA copies or 10 fg of DNA in just 45 minutes—no thermal cycler needed. It covers all major Mollicutes, including *Mycoplasma orale*, *Mycoplasma hyorhinis*, and *Acholeplasma laidlawii*, with no cross-reactivity to bacterial, fungal, or mammalian DNA (verified by Primer-BLAST).

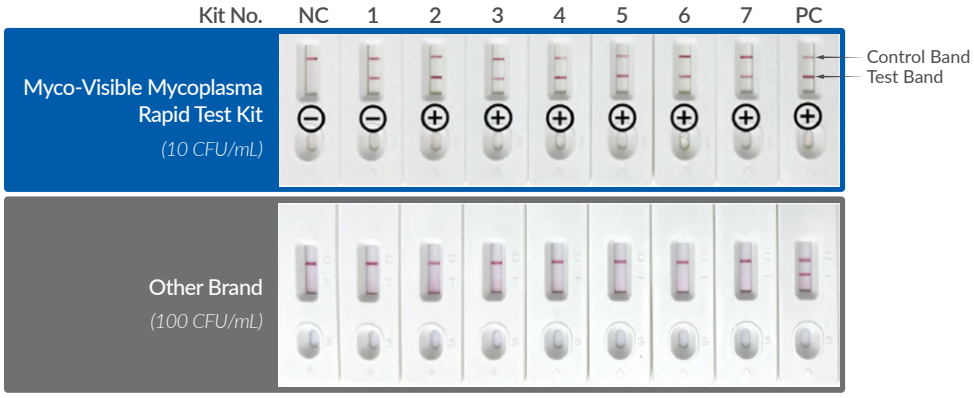


Representative results of a mycoplasma detection test. A negative result is indicated by a pink color, while a positive result is shown by a yellow color.

Results are revealed through a simple color change from pink to yellow, offering a fast, user-friendly solution for your cell culture screening.

The **Myco-Visible Mycoplasma Rapid Test Kit** is a fast, sensitive, and specific way to detect mycoplasma in cell cultures. It targets unique, conserved DNA regions in all major mycoplasma species.

- **High Sensitivity:** Detects as little as 10 CFU/mL or 10 fg of mycoplasma DNA per reaction.
- **Fast Results:** Completes in 1 hour, with visible results on a test strip in under 5 minutes.
- **Broad Detection:** Targets conserved DNA regions across all major mycoplasma species (e.g., *Mycoplasma orale*, *Mycoplasma hyorhinis*, *Acholeplasma laidlawii*).
- **Specific:** No cross-reactivity with bacterial, fungal, or mammalian DNA.
- **User-Friendly:** Simple to perform, no special skills or lab equipment needed



Sample Type

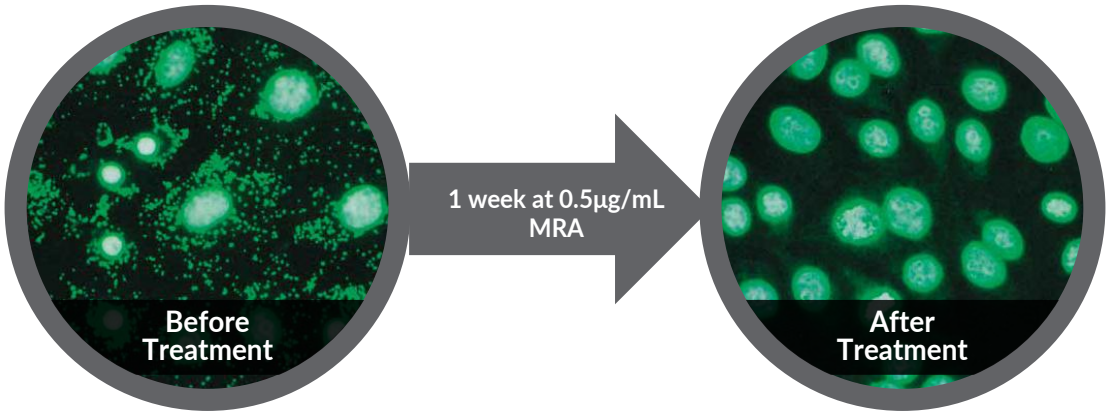
1: *A. laidlawii*
2: *M. arginini*
3: *M. fermentans*
4: *M. hyorhinis*
5: *M. orale*
6: *M. pneumoniae*
7: *M. salivarium*

Discover More Ways to Detect Mycoplasma with Confidence!

	Myco-Sniff-Rapid Mycoplasma Luciferase Detection Kit	**Myco-Visible Mycoplasma LAMP Detection Kit**	**Myco-Visible Mycoplasma Rapid Test Kit**	**Myco-Visible Mycoplasma PCR Detection Kit**
Key Features	HTS Friendly Highly Selective Detects Active Mycoplasma	Visual confirmation No need for Plate reader & Thermal Cycler	Low Detection Limit High Sensitivity Rapid Detection	High Sensitivity High Specificity Rapid, PCR-based Detection
Method	Enzymatic	LAMP	LAMP + Lateral Flow	PCR
Controls	Positive, Negative	Positive, Negative	Positive, Negative	Positive, Negative, Internal
Species Detected	N/A	90	>100	>200
Limit of Detection (LOD)	10 - 50 CFU/mL	10 CFU/mL 10 fg gDNA	10 CFU/mL 10 fg gDNA	10 CFU/mL 10 fg gDNA
Time to Results	~20 min	~60 min	~45 min	~3 hours
Instrument	Microplate Reader (Luminescence Mode)	Heat Block	Microcentrifuge Heat Block	Thermal Cycler Heat Block Electrophoresis System
Result Indicator	Luminescence Activity	Solution Color Change	Lateral Flow Band	Gel Bands

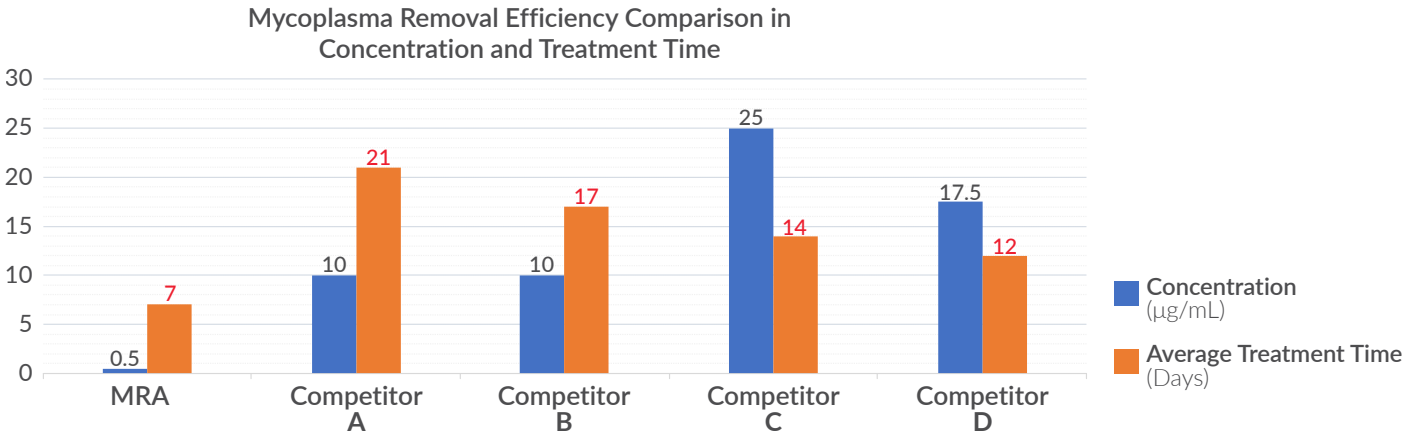
Description	Size	Cat. No.
Myco-Visible Mycoplasma LAMP Detection Kit	40 Preps	093050601
Myco-Visible Mycoplasma Rapid Test Kit	24 Tests	093050901
Myco-Visible Mycoplasma PCR Detection Kit	1 x 100 Tests	093051402
Mycoplasma Removal Agent (MRA)	5 mL	093050044

Mycoplasma contamination is a major challenge in mammalian cell culture, disrupting cellular metabolism, morphology, and proliferation. These simple bacteria can compromise experimental results and lead to cell loss. Detecting and eliminating mycoplasma is crucial to maintaining culture integrity without affecting cell viability. MP Bio's mycoplasma detection kits and **Mycoplasma Removal Agent (MRA)** provide a complete solution for identifying and eradicating mycoplasma, ensuring reliable and reproducible results.



Once Mycoplasma has been detected, treat infected cell culture with Mycoplasma Removal Agent (MRA), the most reliable solution for mycoplasma removal and prevention:

- Eliminates multiple mycoplasma species within one week with the lowest dosage
- Supplement cultures at 0.1µg/mL to prevent recontamination
- Maintains cell viability
- Compatible with most mammalian cell lines
- Sterile and with low cytotoxicity
- Cited in 550+ peer-reviewed publications



Description	Size	Cat. No.
Mycoplasma Removal Agent	5 mL	093050044

Beyond Clean: Comprehensive Lab Protection

Maintaining lab integrity requires more than just clean labware. MP Biomedicals offers specialized solutions to safeguard experiments, equipment, and workspaces from microbial and nucleic acid contamination. Introducing LabCare Antimicrobial Spray & Solution and Nuc-Off Decontamination Solution—your next step in lab-ready precision.

LabCare: Defense Against Microbial Threats

Microbial contamination threatens cells, reagents, and equipment—even in strictly controlled environments. LabCare Antimicrobial Spray & Solution provides broad-spectrum, long-lasting protection, eliminating viruses, bacteria, fungi, mycoplasma, and molds in incubators, biosafety cabinets, and ultra-clean benches.

- IVD-grade isothiazolone antimicrobial agents
- Fast-acting: Eliminates microbial contamination in under 30 minutes
- Long-lasting: Protects surfaces for 7–10 days
- Safe and eco-friendly: Non-corrosive, low-toxicity formula

Description	Size	Cat. No.
Cell Culture Room Spray	100 mL	090301149
	450 mL	090301153
	4 x 1 L	090301153X4
Incubator Antimicrobial Spray	100 mL	090301149
	450 mL	090301153
	4 x 1 L	090301153X4
Incubator Water Disinfectant Solution	100 mL	090301349
	500 mL	090301254
Water Bath Disinfectant Solution	100 mL	090301349
	500 mL	090301354

Nuc-Off: Precision Nucleic Acid Decontamination

Residual nucleic acids, DNases, and RNases can compromise sensitive experiments. Nuc-Off is a non-toxic, ready-to-use solution that rapidly removes contaminants without affecting DNA or RNA stability.

- Fast-acting: Works in just 5 minutes
- Safe and versatile: Compatible with glass, plastic, latex, and stainless steel
- Non-toxic, non-corrosive, and non-irritating—a safer alternative to DEPC
- Ideal for pipettors, thermocyclers, centrifuges, benches, and racks

Protect your lab with LabCare and Nuc-Off—because precision starts with a contamination-free workspace.

Description	Size	Cat. No.	Area
Nuc-Off Nucleases Removal Spray	450 mL	112460450	Bench tops, Pipettes, Racks, Gloves, Other instruments
	1.8 L	112460451	
Nuc-Off Nucleases and DNA Removal Spray	450 mL	112461450	
	1.8 L	112461451	
Nuc-Off Nucleases and Nucleic Acid Removal Spray	450 mL	112462450	
	1.8 L	112462451	

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* 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 such as bacteria, microbial debris, or unwanted fluorescence? 7X Detergent from MP Bio has been trusted for over 65 years and cited in more than 8,000 scientific publications. Highly recommended for applications ranging from lab maintenance to industrial cell culture, it ensures the exceptional cleanliness required in any laboratory setting.

- Effective, water-soluble, and eco-friendly cleaning solutions with no etching of glass or plasticware at 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
	4 x 1 gal	097667094
7X-O-Matic Solution, Machine Wash	4 x 1 gal	097667494
ES 7X Cleaning Solution, Environmentally Safe	1 gal	097667193
	4 x 1 gal	097667194

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
- Validation on many cells
- Long-term cell storage
- Balanced components for maintaining cellular functions
- Long shelf life

Description	Size	Cat. No.
pZerve Cryopreservation Solution	20 mL	092030346
	60 mL	0920303M2
Cell Cryopreservation Medium with 10% DMSO	50 mL	092780248
Cryopres™ Dimethyl Sulfoxide (>99.9% USP DMSO)	10 mL	092780145
	50 mL	092780148

For short-term storage and cell recovery from cryopreservation, we developed 2-8 CELLsium™—a cytoprotective, protein-free, ready-to-use biosolution designed to preserve cells and tissue. Unlike standard cell culture media, 2-8 CELLsium™ maintains cell viability while inducing a temporary senescent phase, ensuring optimal recovery and performance.

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

Immunology Reagents

Antibodies

MP Biomedicals is a trusted provider of high-quality immunological tools, offering a diverse collection of antibodies and sera for labeling, separation, and detection assays. Our products are optimized for western blot, immunoprecipitation, immunostaining, and flow cytometry, ensuring reliable results across various applications.

Comprehensive Antibody Portfolio:

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

Animal Sera: Quality & Versatility:

- Sourced from healthy animals or donors for consistent quality
- Ideal for blocking or saturating nonspecific interactions
- Wide selection from multiple species:
  Goat | Mouse | Bovine | Sheep | Human | Rat | Horse | Hamster | Chicken | Swine
- Readily available for your research needs

Specialized Polyclonal Antibodies: High Sensitivity & Broad Epitope Recognition

Polyclonal antibodies are a diverse population of immunoglobulins produced by multiple B cell clones in response to an antigen. Unlike monoclonal antibodies, they recognize multiple epitopes, enhancing detection sensitivity and target specificity.

With 30+ years of expertise, MP Biomedicals delivers an extensive selection of high-performance polyclonal antibodies across various hosts and targets, offering:

- Superior affinity for antigen binding
- Enhanced detection sensitivity
- High tolerance to pH or buffer changes
- Proven reliability, validated by thousands of scientific publications

For precise and reproducible immunological research, MP Bio's antibodies and sera provide unmatched quality and flexibility.

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 ß-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

Fluorescein isothiocyanate (FITC) is one of the most widely used fluorescent dyes for flow cytometry, immunohistochemistry, and fluorescent immunoassays, due to its high absorptivity, excellent fluorescence quantum yield, and cost-effectiveness.

MP Biomedicals' high-quality FITC-conjugated goat IgG fractions are meticulously designed to ensure superior performance with:

- High affinity for target molecules
- Minimal non-specific binding for cleaner results
- Optimized fluorescence intensity with precise FITC conjugation
- No Fc fragments, reducing unwanted interactions

Ideal for researchers demanding exceptional sensitivity and reliability, MP Bio's FITC-conjugated antibodies enhance fluorescence-based detection with unmatched clarity and precision.

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 μ)	0855153
Fluorescein-Conjugated Goat IgG Fraction to Human IgA (Alpha Chain)	0855077

Monoclonal Antibodies to Actin and Tubulin

Cytoskeletal protein antibodies are essential for protein loading controls and specialized studies such as apoptosis research.

MP Biomedicals' monoclonal antibodies to actin and tubulin offer:

- Broad specificity, reacting with all known vertebrate actins and tubulins
- Reliable positive controls for western blot assays
- No known cross-reactivities, ensuring clean and precise results

Our anti-actin antibodies are validated for all six vertebrate isoactins, while anti-tubulin monoclonal antibodies provide clear microtubule visualization in fixed cells and tissue sections across multiple species.

Description	Size	Cat. No.
Monoclonal Antibody to Actin C4	100 µL	08691001
	200 µL	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
α-Tubulin Monoclonal Antibody		08691251
β-Tubulin Monoclonal Antibody		08691261

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-Beta-Galactosidase, Purified Monoclonal Antibody	08633651
Monoclonal Mouse Anti-Chondroitin-4-Sulfate Antibody	08636511
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.

MP Biomedicals' Cappel™ secondary antibodies offer:

- 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 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	Catalog 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 (β2-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 (PSAAMG). 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.

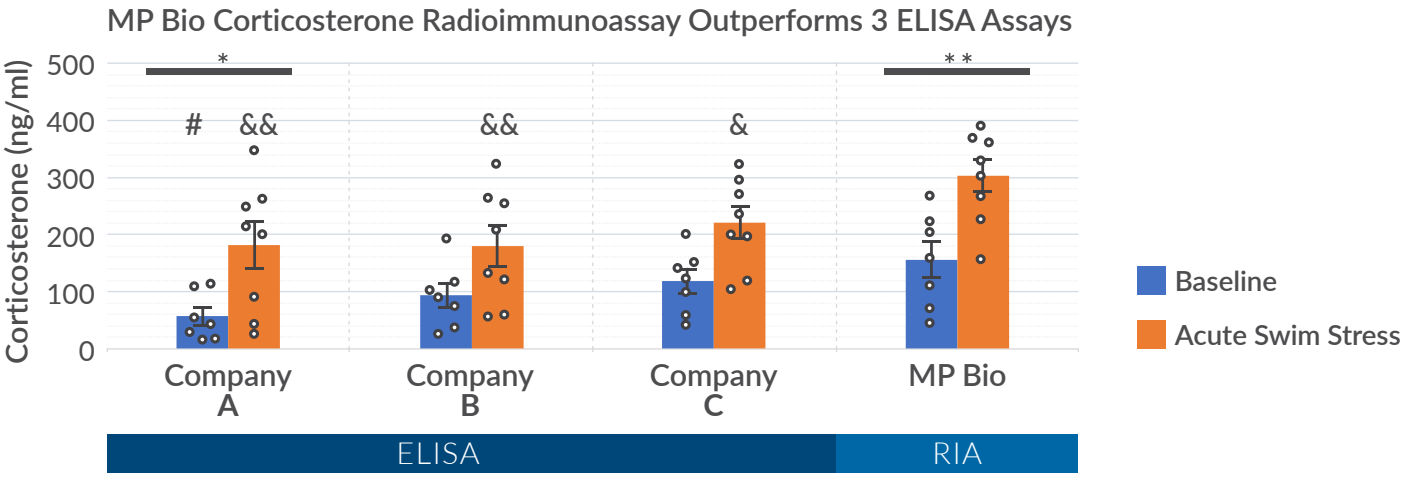
Immunoassays for Stress Research

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

Description	Size	Cat. No.
Corticosterone Double Antibody RIA Kit	100 Tubes	07120102
	200 Tubes	07120103



* Fig 1. Multiple comparisons showed that at baseline, the RIA kit detected significantly higher corticosterone concentrations compared to Company A assay (#, $p < .05$). In the acute stress condition, the RIA kit also detected significantly greater concentrations compared to Company A [(&&, $p < .0001$), B (&&, $p < .0001$), and C assays (&, $p < .01$), respectively] Bekhbat, M.; Glasper E. R.; Rowson, S. A.; Neigh, G. N. Measuring corticosterone concentrations over a physiological dynamic range in female rats. Physiol. Behav. 2018, 194, 73–76.

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	Human
			500	07221105			
			1000	07221106			
	EIA / ELISA	Serum	90	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	

Analyte	Assay Type	Sample Type	Tests	Cat. No.	Sample Vol.	Sensitivity	Species*
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 contains a variety of cell types, including monocytes, lymphocytes, and polymorphonuclear leukocytes, which are routinely isolated for various immunology studies. The isolation of mononuclear and polymorphonuclear cells from blood is a crucial step in many applications, but achieving high yield and maintaining cell viability can be challenging.

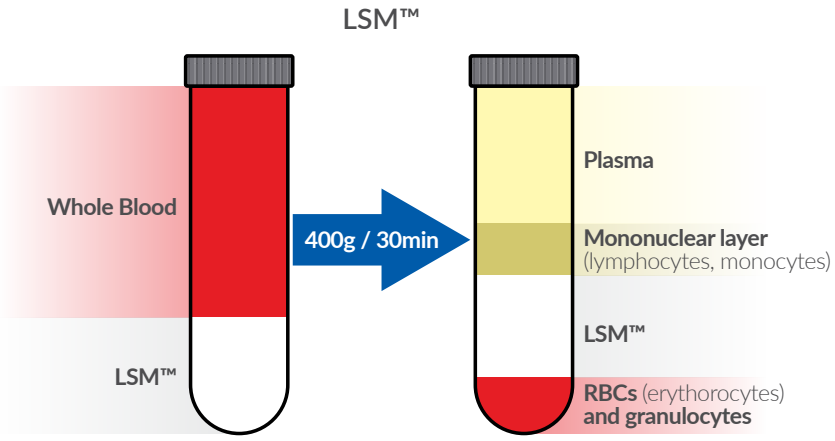
MP Biomedicals offers three specialized products for efficiently isolating these cells from human peripheral blood, bone marrow, and umbilical cord blood:

- Lymphocyte Separation Medium (LSM™)
- LymphoSep®
- Mono-Poly® Resolving Medium

These products have been widely used by researchers worldwide for a variety of applications, ensuring optimal cell yield and viability for downstream analysis.

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 *(Catalog No. 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.

Biochemical Reagents for Cancer Research

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 (DSS) salt 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

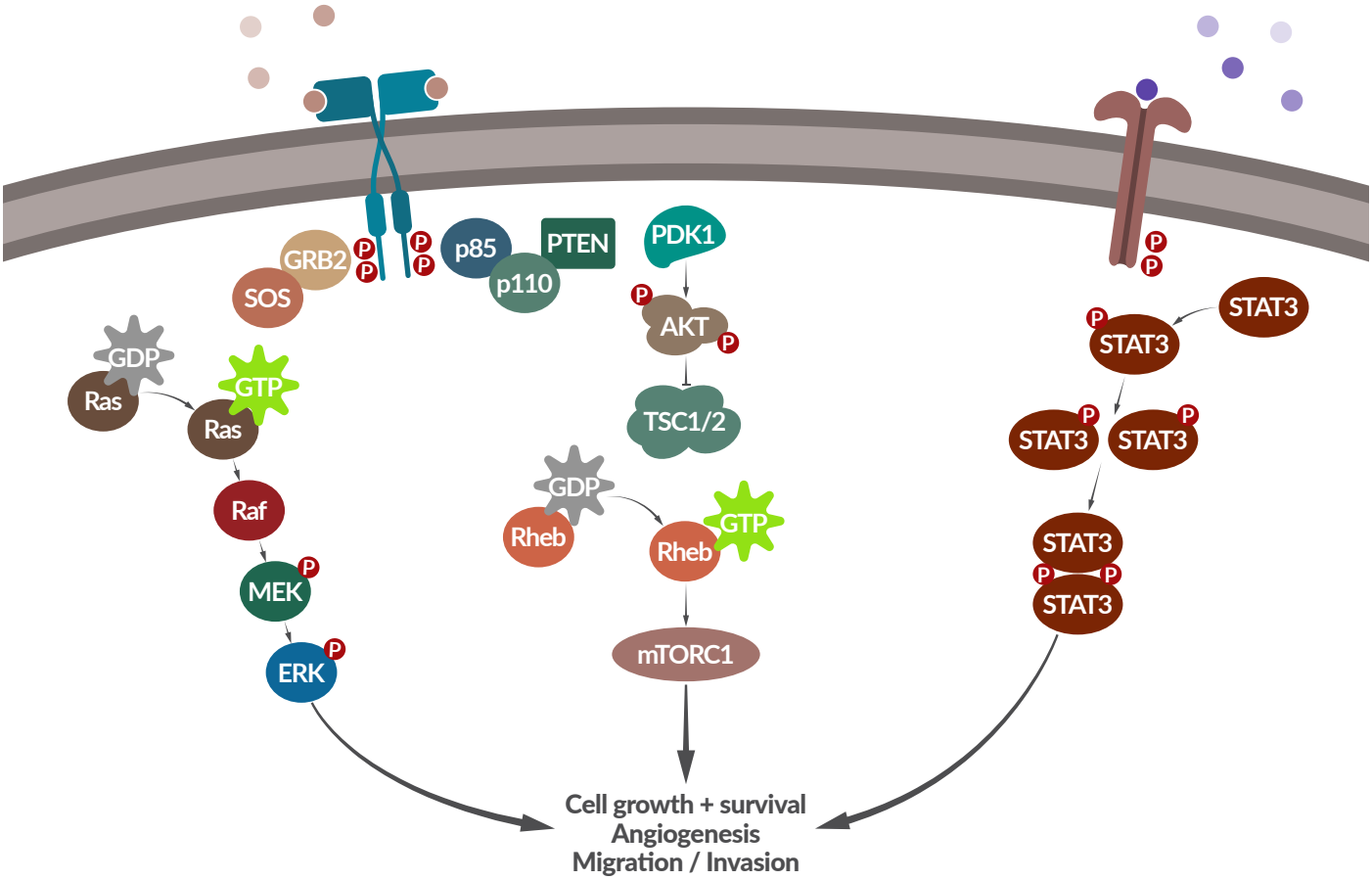
Description	Size	Cat. No.
Dextran Sulfate Sodium Salt (36,000 – 50,000 Da)	1 g	0216011001
	10 g	0216011010
	25 g	0216011025
	50 g	0216011050
	100 g	0216011080
	500 g	0216011090
	1 kg	0216011091
Azoxymethane	100 mg	02180139.1
	25 mg	02180139.3

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 based on their mechanism of action: Angiogenesis Inhibitors, DNA Intercalators/Cross-linkers, DNA Synthesis Inhibitors, DNA-RNA Transcription Regulators, Gene Regulation Agents and Microtubule Inhibitors.

Angiogenesis Inhibitors

Angiogenesis plays a critical role in the growth of cancer because solid tumors need a blood supply if they are to grow beyond a few millimeters in size. Tumors can actually cause this blood supply to form by giving off chemical signals that stimulate angiogenesis. Tumors can also stimulate nearby normal cells to produce angiogenesis signaling molecules.



Angiogenesis inhibitors are unique cancer-fighting agents because they block the growth of blood vessels that support tumor growth rather than blocking the growth of tumor cells themselves.

Angiogenesis inhibitors interfere in several ways with various steps in blood vessel growth. Some are monoclonal antibodies that specifically recognize and bind to VEGF. When VEGF is attached to these drugs, it is unable to activate the VEGF receptor. Other angiogenesis inhibitors bind to VEGF and/or its receptor, as well as to other receptors on the surface of endothelial cells or to other proteins in the downstream signaling pathways, blocking their activities. Some angiogenesis inhibitors are immunomodulatory drugs — agents that stimulate or suppress the immune system — that also have antiangiogenic properties.

Description	Cat. No.
Genistein *Antiangiogenic agent; down-regulates the transcription of genes involved in controlling angiogenesis.*	02152355
Minocycline *Inhibits endothelial cell proliferation and angiogenesis.*	02155718
Thalidomide *Selectively inhibits biosynthesis of tumor necrosis factor α (TNF-α); inhibits angiogenesis.*	02158753

DNA Intercalators/Cross-linkers

A DNA intercalating agent is a molecule that binds to the DNA double helix by inserting itself between the base pairs of the DNA. These agents are typically small, planar compounds that are structurally capable of sliding between the stacked base pairs of the DNA, causing distortion in the helical structure. In cancer treatment, DNA intercalating agents may kill cancer cells by damaging their DNA and stopping them from dividing. Similarly, DNA cross-linking agents have the same ability to bind to DNA nucleotides and inter-link both DNA strands, which can prevent DNA from repairing and synthesizing. In cancer treatment, DNA cross-linking agents may kill cancer cells by damaging their DNA and preventing them from dividing.

Example of Bleomycin Bound to an Oligonucleotide.

Description	Cat. No.
Bleomycin *Inhibits DNA synthesis and causes cleavage at specific base sequences. Induces apoptosis in a variety of cells; inhibits tumor angiogenesis.*	02190306
Carboplatin *Forms cytotoxic adducts with DNA; induces apoptosis.*	02198873
Cyclophosphamide *Cytotoxic nitrogen mustard that crosslinks DNA and causes strand breakage.*	02150749
Melphalan *Forms DNA intrastrand crosslinks by alkylation of 5'-(GGC) sequences.*	02155345

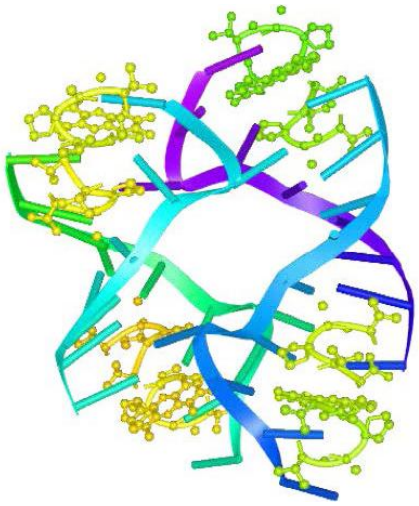
DNA Synthesis Inhibitors

Different from DNA intercalators or cross-linkers which interact directly with DNA nucleotides, DNA synthesis inhibitors interact with enzymes involved in nucleotide assembly and synthesis, such as thymidylate synthetase and ribonucleoside reductase.

Description	Cat. No.
(±)-Amethopterin (Methotrexate) *Folic acid antagonist; blocks thymidine biosynthesis by inhibiting dihydrofolate reductase.*	02102299 (USP Grade) 02199855 (USP and EP Grade)
5-Fluorouracil *Inhibits thymidylate synthetase and depletes dTTP; forms nucleotides that can be incorporated into RNA and DNA and induces p53-dependent apoptosis.*	02101722
Hydroxyurea *Inactivates ribonucleoside reductase and blocks the synthesis of deoxynucleotides, thus inhibiting DNA synthesis and inducing cell death.*	02102023
Mitomycin C *Inhibits DNA synthesis, nuclear division, and proliferation of cancer cells.*	021945320

DNA-RNA Transcription Regulators

Transcription regulators or transcription factors are substances that control the rate of transcription of genetic information from DNA to messenger RNA by binding to a specific DNA sequence. In cancer treatment, transcription regulators typically bind to DNA and form a stable complex to prevent transcription. Therefore, proteins related to cancer cell activities will not be expressed, further inducing cell death.



An example of Actinomycin D binding to CGATCGATCG nucleotides.

Description	Cat. No.
Actinomycin D *Inhibits the proliferation of cells by forming a stable complex with double-stranded DNA, inhibiting DNA-primed RNA synthesis and causing single-stranded breaks in DNA. It has been shown to be an inhibitor of the minus-strand transfer step in reverse transcriptase.*	02104658
Daunorubicin *Complexes to DNA and blocks production of mRNA by RNA polymerase.*	02150777
Doxorubicin *Binds to DNA and inhibits reverse transcriptase and RNA polymerase.*	02159101

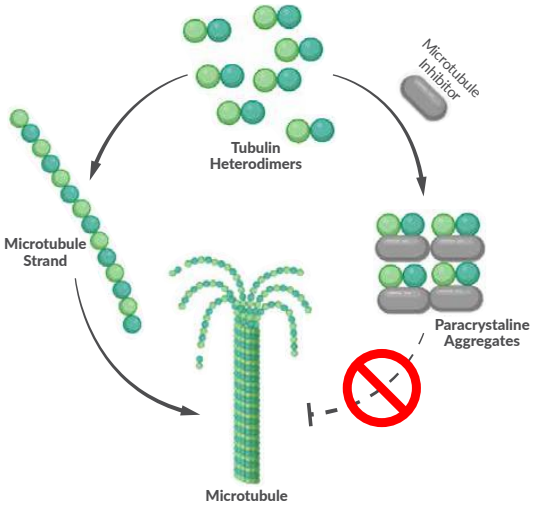
Enzyme Inhibitors

Cancer cell proliferation, differentiation and migration are always involved in tumor development. These cellular activities are regulated by enzymatic reactions. Enzyme inhibitors in cancer treatment generally target enzymes related to cell proliferation, metastasis and gene regulation. The targeted enzymes are inhibited due to a disruption of normal cellular activities, leading to cell apoptosis to try and cure the cancer.

Description	Cat. No.
S(+)-Camptothecin *Binds irreversibly to the DNA-topoisomerase I complex leading to the irreversible cleavage of DNA and the destruction of cellular topoisomerase I by the ubiquitin-proteasome pathway. Induces apoptosis in many normal and tumor cell lines.*	02159732
Curcumin *Potent inhibitor of protein kinase C, EGFR tyrosine kinase and IκB kinase. Induces apoptosis in cancer cells.*	02190313
Etoposide *Binds to the DNA-topoisomerase II complex to enhance cleavage and inhibit re-ligation; inhibits synthesis of the oncoprotein Mdm2 and induces apoptosis in tumor lines that overexpress Mdm2.*	02193918
Tamoxifen *Protein Kinase C inhibitor that induces apoptosis in human malignant glioma cell lines; block estradiol-stimulated VEGF production in breast tumor cells.*	02156738
Tamoxifen Citrate Salt *Protein Kinase C inhibitor that induces apoptosis in human malignant glioma cell lines; block estradiol-stimulated VEGF production in breast tumor cells.*	02156739
Sodium Valproate *Causes inositol depletion, activates the ERK pathway, inhibits GSK-3α and GSK-3β. Valproic Acid has been observed to reduce tumor growth and metastasis formation.*	02152064

Microtubule Inhibitors

Microtubule inhibitors are a class of compounds that inhibit the function of cellular microtubules. Microtubules are key structural elements of the cell cytoskeleton, composed of polymers of tubulin. They are also important cellular targets for anticancer therapy because of their key role in mitosis. Microtubule inhibitors such as taxanes, vinca alkaloids, and epothilones stabilize or destabilize microtubules, thereby suppressing microtubule dynamics required for proper mitotic function. This results in blocking of the cell cycle progression and ultimately leads to apoptosis.



Description	Cat. No.
Colchicine *Antimitotic agent that disrupts microtubules by binding to tubulin and preventing its polymerization; induces apoptosis in several normal and tumor cell lines.*	05208170
Paclitaxel *Binds to β-tubulin and promotes the formation of highly stable microtubules that resist depolymerization, preventing cell division.*	02193532
Vinblastine Sulfate *Antimitotic agent. Inhibits microtubule assembly by binding tubulin and inducing self-association; depolymerizes pre-existing microtubules. Induces apoptosis in several tumor cell lines.*	02190287
Vincristine Sulfate *Antimitotic agent. Inhibits microtubule assembly by binding tubulin and inducing self-association; depolymerizes pre-existing microtubules. Induces apoptosis in several tumor cell lines.*	02190687

Other Antitumor Agents

Description	Cat. No.
Apigenin *Inhibits cell proliferation by arresting the cell cycle at the G2/M phase. Inhibition of growth through cell cycle arrest and induction of apoptosis appear to be related to induction of p53. Inhibitory effects on tumor promotion may also be due to inhibition of kinase activity and the resulting suppression of oncogene expression. It has also been reported to inhibit topoisomerase I catalyzed DNA re-ligation and enhance gap junctional intercellular communication.*	05203671
Brefeldin A *Disrupts the structure and function of the Golgi apparatus. An activator of the sphingomyelin cycle.*	02194802
Rapamycin *Inhibition of the molecular target of rapamycin (mTOR) mediates the antiproliferative and anticancer activity of rapamycin by blocking the PI3K/Akt pathway.*	02159346
Thapsigargin *Cytotoxin that induces apoptosis by disrupting intracellular free Ca2+ levels.*	02158999
3-Methyladenine *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.*	02155459

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

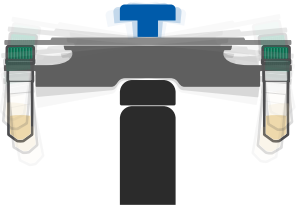
The FastPrep® system is a comprehensive laboratory solution that optimizes the lysis, grinding, or homogenization process from virtually any sample type. Mechanical lysis disrupts cells and tissues for the isolation of DNA, RNA, proteins, metabolites, and other small molecules, and eliminates the need 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

Step 1

Prepare Lysis Tube

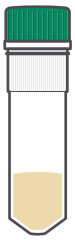
Step 2



40 seconds

Process with FastPrep Instrument

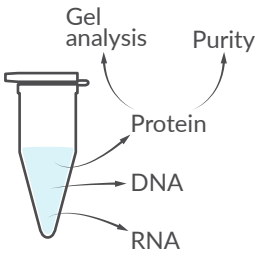
Step 3



1 minute

Centrifuge to pellet debris

Step 4



Transfer cleared lysate

FastPrep® Instruments

FastPrep-24™ 5G

The FastPrep-24™ 5G is a high-performance benchtop homogenizer based on bead-beating technology, delivering unmatched speed and efficiency for the lysis of biological samples. Designed as a self-contained system, it eliminates the risk of cross-contamination and the need for time-consuming manual clean-up. Its key differentiating features include the ability to store programs for reproducible results and the most versatile compatibility with a wide range of sample types and volumes. Providing complete and quantitative lysis of both challenging and routine samples, the FastPrep-24™ 5G is ideal for applications requiring 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

FastPrep-96™ Pro

The FastPrep-96™ Pro is a cutting-edge, high-throughput homogenizer designed for the rapid and efficient lysis of even the toughest samples. Its key differentiator is its compatibility with 96-well plates, enabling the simultaneous processing of multiple samples with exceptional speed and consistency. Utilizing true linear motion, the FastPrep-96™ Pro accelerates the extraction of DNA, RNA, proteins, and small molecules in mere seconds. With unmatched versatility, reliability, and high-throughput capabilities, it is the ultimate tool for streamlining sample preparation workflows.

- Processes up to 192 samples with excellent reproducibility.
- Enhances sample processing efficiency through true linear motion.
- User friendly touchscreen for simplified operation.
- Clear LED indicator status for easy monitoring.
- Various compatible accessories to accommodate different sample types and volume.
- Ensures maximized quality and yield of DNA, RNA, Proteins, and other biomolecules from cells and tissues

Why Choose FastPrep-96™ Pro?

Perfect for labs needing high-throughput, reliable sample prep for downstream applications like PCR, sequencing, or protein analysis. From soft tissues to resistant fungi, FastPrep handles it all with ease.

Specification	FastPrep-24™ 5G	FastPrep-96™ Pro
Sample Capacity	Up to 48	192 (across 2 mL or 96-well plate)
Tube Volume	2ml, 4.5ml, 5ml, 15ml, 50ml	2 mL, 96-well plate
Motion	Figure 8 Tridimensional	Linear motion (vertical)
Speed Range	4.0 - 10.0 m/s	800 - 1800 rpm
User Interface	Touch-screen	Touch-screen
Progress Indicator	Screen Display	Real-time colored LED progress bar
Applications	Advanced Bench-Top Bead Beating Lysis	High-throughput lysis and homogenization
Dimensions (W x L x H)	19.3 x 18.6 x 15.2 in (490 x 472 x 385 mm)	15.7 x 26 x 21.3 in (400 x 660 x 540 mm)
Weight	52 lb (23.6 kg)	66 lb (30 kg)
Typical Sample Processing Time	< 2 minutes	< 2 minutes

Description	Cat. No.
FastPrep-24™ 5G Instrument	116005500
FastPrep-96™ Pro	116014500

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 allow extremely reproducible results 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

Smart Vortenizer

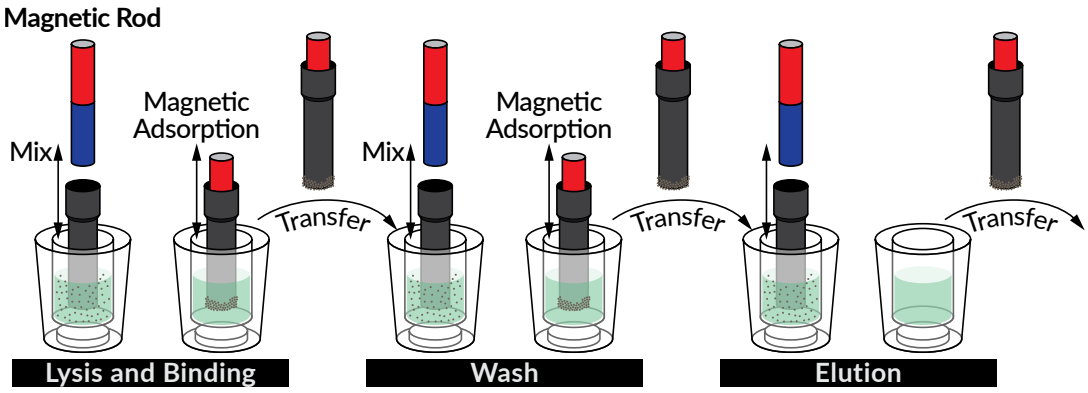
The Smart Vortenizer is MP Biomedicals' affordable alternative for precise sample agitation. Designed for versatility and ease of use, it's the ideal choice for labs seeking quality on a budget—perfect for occasional homogenization needs where processing speed is not the top priority.

- True circular orbit vortexing ensures even mixing across all speeds
- Robust design for use under fume hoods or on sterile workbenches
- Digital speed and time settings for customizable shaking, mixing, or pulsing
- Supports a wide range of tube and vessel sizes—from gentle agitation to pellet resuspension

Description	Cat. No.
Smart Vortenizer	118100500

Automated Nucleic Acid Purification (aNAP) Platform

Magnetic Bead–Based Nucleic Acid Purification Workflow.



During lysis and binding, samples are lysed and nucleic acids bind to magnetic beads, which are collected by a magnetic rod. In the wash step, the bead–nucleic acid complexes are mixed in wash buffer to remove impurities, with the magnetic rod transferring clean beads between wells. Finally, in the elution step, the beads are suspended in elution buffer, releasing purified nucleic acids into solution while the beads are removed, leaving high-quality nucleic acids ready for downstream use.

MPure-32 aNAP System

Elevate your lab's efficiency with the MPure-32 aNAP System—a fully automated, magnetic bead-based platform designed for high-performance nucleic acid extraction of up to 32 samples.

- **Exceptional Purity & Yield**
  Deliver high-quality nucleic acids for reliable downstream applications
- **High Flexibility**
  Customize protocols to suit your needs with an open, user-friendly platform
- **Effortless Workflow**
  Simplify operations and minimize errors with a streamlined, automated process
- **Rapid & Consistent Results**
  Achieve reproducible outcomes in record time, every time

For more information on the MPure-32:

Visit our MPure-32 webpage

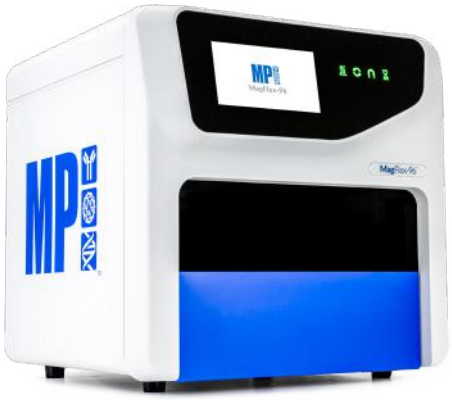
mpbio.com

or

Watch our instructional video

youtube.com

MagFlex-96 aNAP System



The **MagFlex-96 aNAP System** offers an efficient solution for processing 1 to 96 samples using magnetic bead-based separation. Its compact design combines walk-away automation, customizable protocols, and UV sterilization to ensure consistent, high-quality results. With support for a wide range of sample types and compatibility with commercial extraction kits, the MagFlex-96 provides laboratories with a practical and versatile tool for routine DNA and RNA purification.

- **Flexible Throughput**
  Process anywhere from **1 to 96 samples** without waste.
- **Fast and Efficient**
  Complete runs in just **30–60 minutes** with true walk-away automation.
- **Unique rotary mixing technology**
  Reduces aerosols and cross-contamination for reliable results.

For more information on the MagFlex-96:

Visit our MagFlex-96 webpage

mpbio.com

or

Watch our instructional video

youtube.com

Choosing Between the MagFlex-96 and MPure-32 aNAP Systems

The MagFlex-96 is ideal for labs needing high throughput and flexible workflows, processing up to 96 samples with advanced rotary mixing and broad programmability. The MPure-32, with its smaller footprint and 32-sample capacity, is better suited for routine or space-limited labs seeking reliable, everyday nucleic acid purification.

Feature	MagFlex-96 aNAP System	MPure-32 aNAP System
Run Time	30 - 60 minutes	45 - 60 minutes
Samples per Run	1 - 96 samples	1 - 32 samples
Weight	45 kg (99 lb)	21 kg
Dimensions	49 x 51 x 48 cm	38 x 35 x 37 cm
Processing Volume	30 - 1,000 µL	50 - 1,000 µL
Mixing Technology	Rotary mixing	Standard mixing
Heating Range	30 - 120 °C	25 - 70 °C
Temperature Control	Yes	Yes

Feature	MagFlex-96 aNAP System	MPure-32 aNAP System
UV Lamp	Yes	Yes
User Interface	7-inch touchscreen	5.5-inch touchscreen
Workflow	Fully programmable	Fully programmable
Footprint	Larger for higher throughput	Smaller, lighter, for medium throughput

Description	Cat. No.
MagFlex-96 aNAP System (RUO)	116013500
MagFlex-96 aNAP System (CE)	EMC047
MPure-32 aNAP System (RUO)	EMC043D
MPure-32 aNAP System (CE)	EMC043

Nucleic Acid Preservation 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

Cancer research demands precision and versatility. MP Bio's isolation kits are optimized to handle the complexity of cancer-related samples—such as heterogeneous tumor tissues or precious cell culture models—ensuring maximum yield and integrity of genomic DNA (gDNA), RNA, or proteins. With rapid protocols and robust purification technology, these kits minimize degradation and contamination, delivering analytes ready for cutting-edge molecular analyses. Choose the kit that fits your research focus.

Urine Collection and Preservation Kits

Urine is an important, non-invasive source of biomarkers in cancer research, containing both cell-free DNA (cfDNA) and genomic DNA (gDNA) from exfoliated cells. These nucleic acids, however, are highly unstable and degrade rapidly after collection. The Urine Collection & Preservation Kit stabilizes cfDNA, gDNA, and nucleated cells, maintaining sample integrity from collection to analysis. By ensuring reliable storage and transport, the kit enables consistent, high-quality results in downstream cancer research applications.

- Stabilizes cfDNA, gDNA, and nucleated cells in urine for up to 30 days at room temperature
- Direct-to-sample use — simply add solution to urine, no preprocessing required
- Maintains sample integrity during storage and shipping for reliable downstream analysis

Description	Size	Cat. No.
Urine Collection and Preservation Kit	8 Packs	116594000
Urine Preservation Solution	350 mL	116594350

RNAintact Stabilization Solution

RNAintact Stabilization Solution is an aqueous preservation buffer that stabilizes and preserves RNA in a wide range of sample types, including bacteria, tissue culture cells, animal tissues, and some plant tissues. It protects RNA integrity by rapidly inactivating RNases, ensuring an RNase-free storage environment. RNAintact is suitable for both field and laboratory use, allowing sample storage at conditions ranging from ambient (up to 37 °C) to frozen (–80 °C). Samples stored in RNAintact yield high-quality RNA compatible with common RNA isolation protocols, ensuring reliable results for downstream oncology applications.

- Preserves RNA across diverse storage conditions (–80 °C to 37 °C)
- Compatible with multiple sample types: bacteria, cultured cells, animal and plant tissues
- Easy-to-use — ideal for field collection without immediate refrigeration

Description	Size	Cat. No.
RNAintact Stabilization Solution	1 x 50 mL	11RINTA050
	1 x 100 mL	11RINTA100
	50 x 1.5 mL	11RINTA005

SPINeasy Purification Kits

Why SPINeasy Nucleic Acid Extraction Kits for Cancer Research?

- **High Yield and Purity**
  Recover more material with less starting sample, critical for rare or limited tumor biopsies.
- **Speed and Simplicity**
  Fast protocols save time without compromising quality, accelerating your research timeline.
- **Reliability**
  Consistent results across replicates and sample types, ensuring reproducible data for publication or clinical translation.
- **Versatility**
  Compatible with diverse cancer sample types, from solid tumors to metastatic cell lines, making them a staple in oncology labs.

Description	Size	Cat. No.
DNA		
SPINeasy DNA Kit for Blood	50 Preps	116552050
SPINeasy DNA Kit for Tissue (With Lysing Matrix)	50 Preps	116558050
SPINeasy DNA Kit for Tissue (Without Lysing Matrix)	50 Preps	116559050
SPINeasy DNA Kit for Urine	50 Preps	116593050
RNA		
SPINeasy RNA Kit for Blood	50 Preps	116566050
SPINeasy RNA Kit for Tissue (With Lysing Matrix)	50 Preps	116543050
SPINeasy RNA Kit for Tissue (Without Lysing Matrix)	50 Preps	116542050
SPINeasy RNA Kit for Urine	50 Preps	116595050
Co-Purification Kits		
SPINeasy DNA/RNA/Protein All In One Kit	50 Preps	116544050
SPINeasy® DNA/RNA Kit for Blood	96 Preps	116582000
	4 x 96 Preps	116582050
96-Well Kits		
SPINeasy 96-Well DNA Kit for Blood	96 Preps	116552096
	4 x 96 Preps	116552496
SPINeasy 96-Well DNA Kit for Tissue	96 Preps	116559096
	4 x 96 Preps	116559496

MagBeads Kits for Cancer Research

MP Biomedicals' MagBeads Extraction Kits leverage advanced magnetic bead-based technology to deliver rapid, high-quality nucleic acid purification tailored for cancer research. These kits are designed to isolate DNA and RNA from critical cancer-related samples—such as whole blood, formalin-fixed paraffin-embedded (FFPE) tissues, and circulating cell-free DNA—with exceptional purity and yield. Available in manual and automatable formats (compatible with MPure-32 and MPure-96 platforms), MagBeads Kits streamline workflows, making them ideal for both small-scale experiments and high-throughput oncology studies.

Description	Cat. No.
MagBeads Extraction Kits (Manual)	
MagBeads FastDNA Kit for Blood	116574096
MagBeads FastRNA Kit for FFPE	116573192
MagBeads FastDNA Kit for FFPE	116576096
MagBeads Fast Circulating DNA Kit	116577192
MagBeads FastRNA Kit for Blood	116586050
MagBeads Extraction Kits (Ready-to-Use for MPure-32)	
MagBeads FastDNA Kit for Blood (Ready-to-Use for MPure-32)	117033700
MagBeads FastRNA Kit for FFPE (Ready-to-Use for MPure-32)	117033500
MagBeads FastDNA Kit for FFPE (Ready-to-Use for MPure-32)	117033800
MagBeads Fast Circulating DNA Kit (Ready-to-Use for MPure-32)	117033900
MagBeads FastRNA Kit for Blood (Ready-to-Use for MPure-32)	117039100
MagBeads Extraction Kits (Ready-to-Use for MagFlex-96)	
MagBeads FastDNA Kit for Blood (Ready-to-Use for MagFlex-96)	119610096
MagBeads FastRNA Kit for Blood (Ready-to-Use for MagFlex-96)	119609096

Gel 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

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:

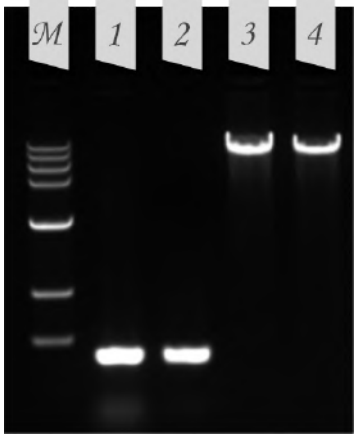
- **High column capacity** – binds up to 10 µg of DNA
- **High yields** – DNA recovery is up to 95%
- **Fast** – 12 samples are processed in 15 minutes
- **Effective** – purified DNA performs well in downstream applications
- **Complete** – kits contain all columns and solutions required

Description	Size	Cat. No.
GENECLEAN® Turbo for PCR Kit For purification of PCR products ranging from 100 bp to 10 kb	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 solution	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.	50 preps	111101200
	100 preps	111101400
	300 preps	111101600

SPINeasy PCR Purification and Gel Extraction Kit

The SPINeasy® PCR Purification and Gel Extraction Kit is a silica-membrane spin-column kit that enables quick and convenient DNA clean up from various enzymatic reactions, such as PCR and restriction digestion, as well as isolation and purification of DNA fragments from agarose gel electrophoresis.

Up to 23 µg of DNA of molecular weight ranging from 100 bp to 20 kb can be purified through a quick and simple process. Purified DNA is immediately ready for routine molecular biology laboratory applications.



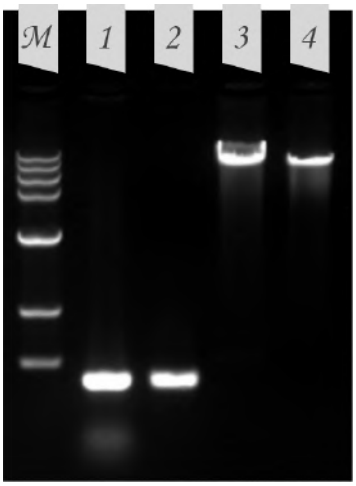
M: DNA marker

1: Unpurified PCR reaction (input)

2: Purified PCR product

3: Unpurified plasmid restriction digest reaction (input)

4: Purified restriction digested plasmid



M: DNA marker

1: Unpurified PCR reaction (input)

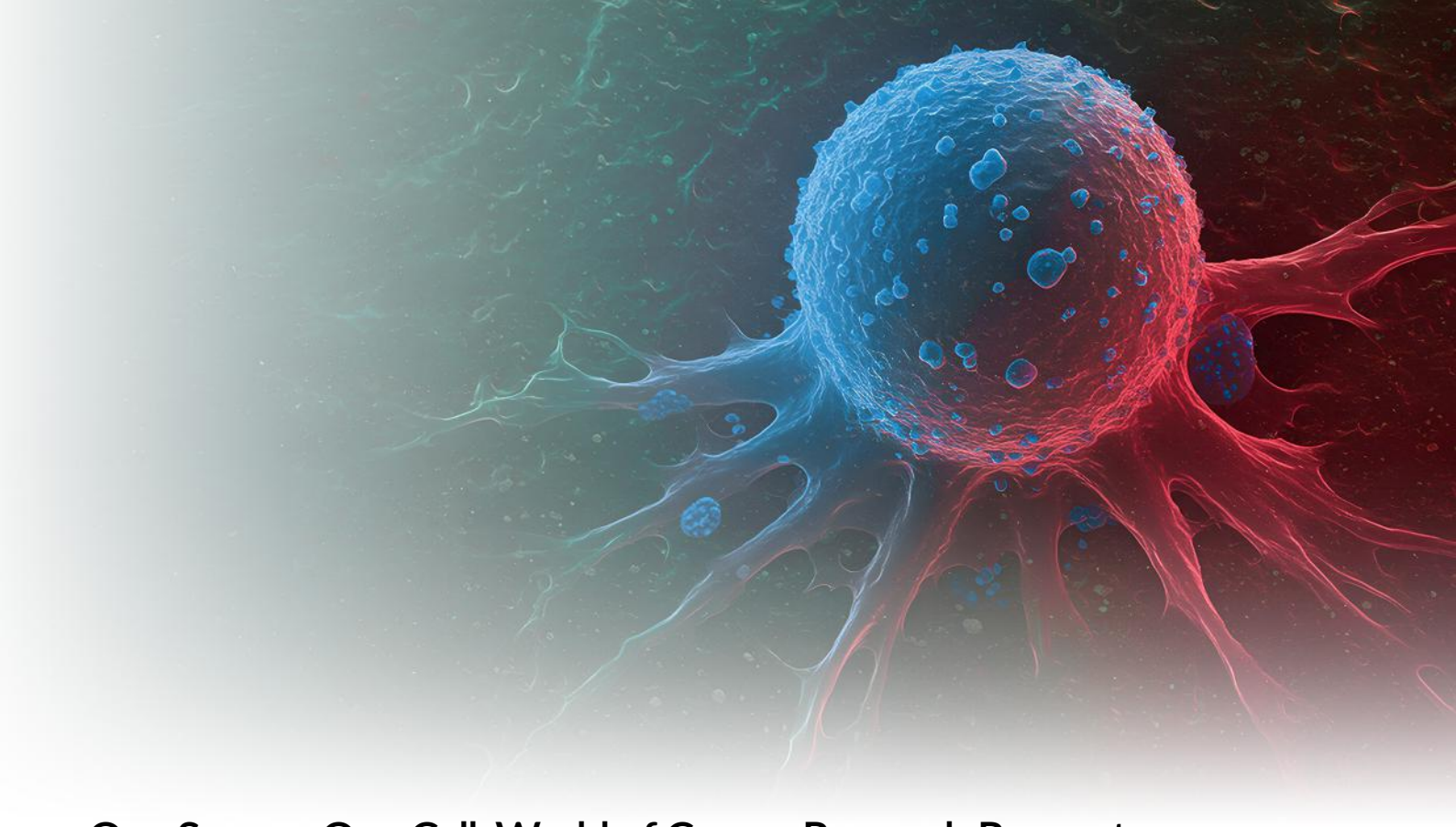
2: Purified PCR product

3: Unpurified plasmid restriction digest reaction (input)

4: Restriction digested plasmid purified by gel extraction

Agarose gel electrophoresis of PCR-purified DNA (left) and gel extracted-DNA (right) using SPINeasy® PCR Purification and Gel Extraction Kit

Description	Size	Cat. No.
SPINeasy® PCR Purification and Gel Extraction Kit	50 preps	116538050
	5 preps	116538000



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

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