ATLANTIS BIOSCIENCE
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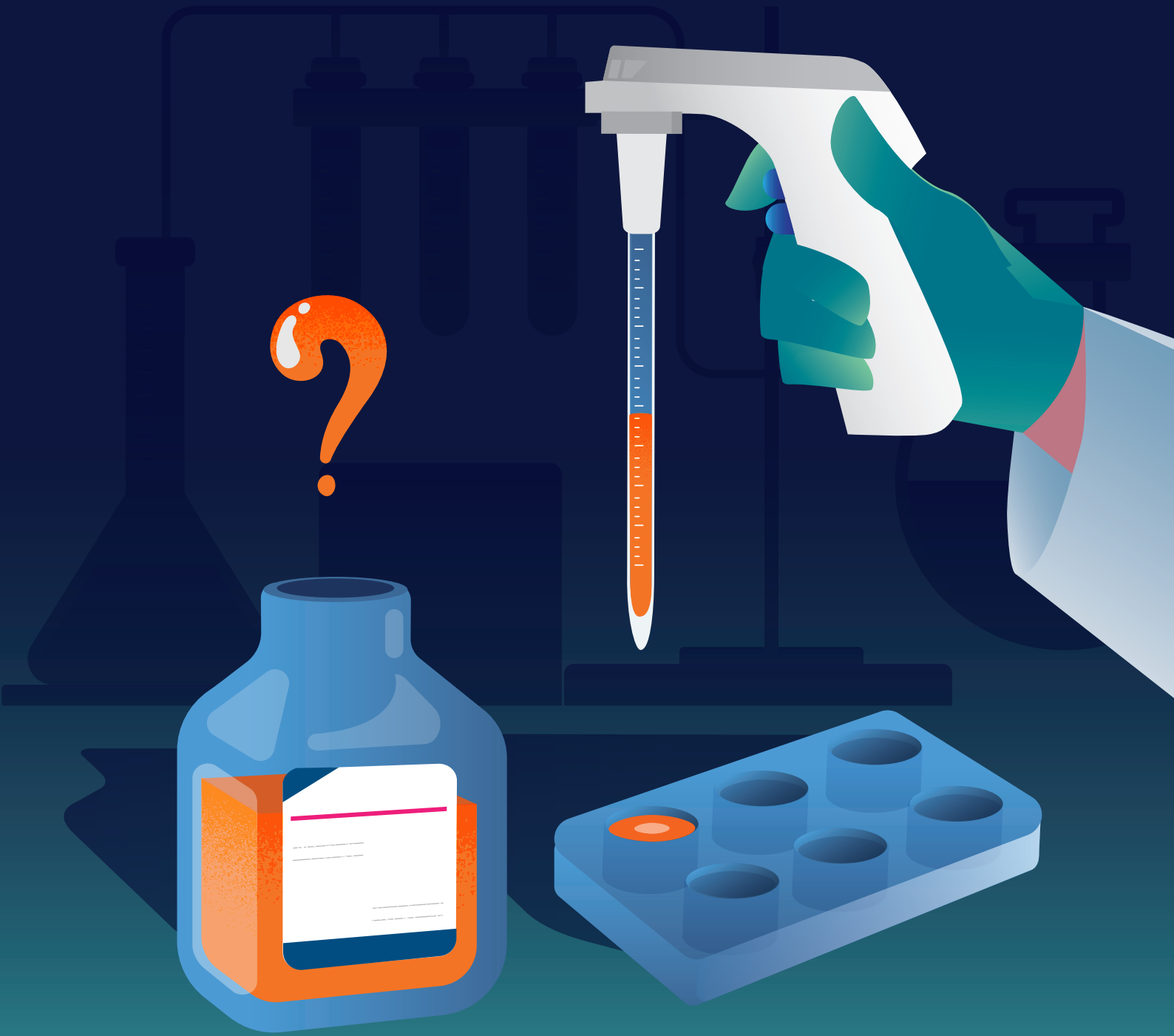
TRYING TO FIND THE RIGHT SERUM FOR YOUR RESEARCH?



Use this guide as your go-to reference to discover the ideal serum for your specific needs and achieve consistent, reliable results.

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TYPE OF SERUM	WHAT IS IT?	RECOMMENDED APPLICATION	FEATURED PUBLICATIONS	JOURNAL	VIEW PRODUCT
S181H Fetal Bovine Serum (FBS), **Heat Inactivated**	Heat inactivation fetal bovine serum involves the inactivation of complement proteins in the serum, to prevent these proteins from interfering with experimental set up.	**IMMUNOLOGY:** a. Complement dependent cytotoxicity assays (CDC) **VIROLOGY:** a. Virus Propagation: Complement activation can interfere with virus replication Working with sensitive cell lines: a. Hybridomas: These cells produce monoclonal antibodies, their nature makes them vulnerable to complement-mediated lysis b. Erythroid Cell Lines: Rich in complement receptors, these cells are easily targeted and damaged by complement activation c. Primary Cell Lines: Hepatocytes, neurons and certain immune cells can be sensitive to complement based on its tissue origin and isolation method used d. Receptor-Expressing Cells: Cells that express high levels of complement receptors (e.g., CR1, CR2, CR3) are more likely to be targets for complement activation	The TP53-activated E3 ligase RNF144B is a tumour suppressor that prevents genomic instability	*Journal of Experimental & Clinical Cancer Research*	
			Integrating flexible electronics for pulsed electric field delivery in a vascularized 3D glioblastoma model	*npj Flexible Electronics*	
			Transcriptome Reprogramming of CD11b+ Bone Marrow Cells by Pancreatic Cancer Extracellular Vesicles	*Frontiers in Cell and Developmental Biology*	
			Employing flow cytometry to extracellular vesicles sample microvolume analysis and quality control	*Frontiers in Cell and Developmental Biology*	Scan to view product
			High production of IL-12 by human dendritic cells stimulated with combinations of pattern-recognition receptor agonists	*npj Vaccines*	
S181D Fetal Bovine Serum (FBS) South America, **Dialysed**	Dialyzed FBS involves the process of removing low molecular weight components to reduce the concentration of small molecules (amino acids, hormones, nucleotides and salts) from the culture environment.	**METABOLIC STUDIES:** To investigate cellular metabolism and nutrient uptake, researchers often use dialyzed FBS to control the availability of specific amino acids and other nutrients **HORMONE STUDIES:** When studying the effects of specific hormones, removing endogenous hormones from the serum can provide a more defined hormonal environment **RADIOLABELING STUDIES:** Dialyzed FBS can be used in experiments involving the incorporation of radiolabeled compounds, as it reduces the background levels of labeled molecules **CELL SIGNALING STUDIES:** By controlling the levels of specific signaling molecules, researchers can better understand cellular responses **PROTEOMICS (MASS SPECTROMETRY STUDIES):** To accurately identify and quantify proteins in complex biological samples without interference from serum-derived contaminants	ULK1 phosphorylation of striatin activates protein phosphatase 2A and autophagy	*Cell Reports*	
			mTORC1 controls Golgi architecture and vesicle secretion by phosphorylation of SCYL1	*Nature Communications*	
			DIPPER, a spatiotemporal proteomics atlas of human intervertebral discs for exploring ageing and degeneration dynamics	*Elife*	Scan to view product

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S181F Fetal Bovine Serum (FBS) South America, **Charcoal Stripped**	Charcoal stripped FBS involves the treatment of activated charcoal to remove non-polar, lipophilic components such as steroids, growth factors and some cytokines without affecting the concentration of salts, glucose or amino acids.	**HORMONE-DEPENDENT CELL STUDIES:** a. Endocrine research: To investigate the effects of specific hormones on cells without the interference of endogenous hormones a. Cancer research: To study hormone-responsive cancers and their interactions with hormones **CELL SIGNALING STUDIES:** To examine the impact of specific growth factors or cytokines on cellular responses. **DRUG DEVELOPMENT:** To assess the efficacy of drug candidates that target hormone receptors. **IN VITRO FERTILIZATION (IVF):** To create a controlled hormonal environment for embryo culture. **STEM CELL RESEARCH:** To study the differentiation of stem cells under specific hormonal conditions.	The decidual stromal cells-secreted CCL2 induces and maintains decidual leukocytes into Th2 bias in human early pregnancy	*Clinical Immunology*	
			Estrogenic G protein-coupled receptor 30 signaling is involved in regulation of endometrial carcinoma by promoting proliferation, invasion potential, and interleukin-6 secretion via the MEK/ERK mitogen-activated protein kinase pathway	*Cancer science*	
			17β-estradiol down-regulates lipopolysaccharide-induced MCP-1 production and cell migration in vascular smooth muscle cells	*Journal of Molecular Endocrinology*	
			17β-estradiol upregulates striatin protein levels via Akt pathway in human umbilical vein endothelial cells	*PLOS ONE*	Scan to view product
			Key parameter optimization using multivariable linear model for the evaluation of the in vitro estrogenic activity assay in T47D cell lines (CXCL-test)	*Journal of Applied Toxicology*	
			BRS1, a serine carboxypeptidase, regulates BRI1 signaling in Arabidopsis thaliana	*PNAS*	
S181G Fetal Bovine Serum (FBS) South America, **Gamma Irradiated**	Gamma irradiation is a sterilization process used to inactivate microorganisms, including bacteria, viruses, and mycoplasma, in Fetal Bovine Serum (FBS). This treatment ensures the sterility of the serum and reduces the risk of contamination in cell culture systems.	Use in cases when high sterility is required **CELL THERAPY:** To prevent contamination of cell cultures used for therapeutic purposes **VACCINE PRODUCTION:** To ensure the sterility of components used in vaccine manufacturing **BIOPHARMACEUTICAL PRODUCTION:** To maintain a sterile environment for the production of biopharmaceuticals **RESEARCH INVOLVING SENSITIVE CELL LINES:** To protect valuable and delicate cell cultures from contamination, and ensure patient safety (Primary cells, stem cells, immune cells, hybridoma cells and cells for therapeutic applications)	Thioredoxin downregulation enhances sorafenib effects in hepatocarcinoma cells	*Antioxidants*	
			Mitochondrial respiration restricts Listeria monocytogenes infection by slowing down host cell receptor recycling	*Cell Reports*	
			The Role of Cytoskeletal Proteins in the Formation of a Functional In Vitro Blood-Brain Barrier Model	*International Journal of Molecular Sciences*	
			The Consideration of Pseudoxanthoma Elasticum as a Progeria Syndrome	*Frontiers in Bioscience-Landmark*	Scan to view product
			High-Resolution Insights Into the in vitro Developing Blood-Brain Barrier: Novel Morphological Features of Endothelial Nanotube Function	*Frontiers in Neuroanatomy*	

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S181I Fetal Bovine Serum (FBS) South America, **IgG Depleted**	IgG-depleted FBS, obtained by a proprietary chromatography method, is an ideal solution for cell culture and protein purification applications where naturally occurring IgG levels are too high. The IgG level after depletion is <5 µg/ml.	**HYBRIDOMA CELL CULTURE:** The primary use case for IgG-depleted FBS is in hybridoma cell culture. By reducing the background IgG levels, it facilitates the purification of monoclonal antibodies **IMMUNOLOGICAL STUDIES:** In certain immunological studies, reducing IgG levels can help to isolate the effects of specific antibodies or antigens. Lower IgG levels minimize background noise in immunological assays **IgG-DEPENDENT CELL CYTOTOXICITY:** IgG can mediate antibody-dependent cell-mediated cytotoxicity (ADCC). By minimizing IgG levels, ultra-low IgG FBS allows for a more accurate evaluation of cell cytotoxicity induced by other factors, such as complement-dependent cytotoxicity or direct cell lysis	*No Open-Source Publications As Of Jul 2024*		 Scan to view product
S181L Fetal Bovine Serum (FBS) South America, **Lipid Depleted**	Lipid Depleted is a specialized serum that has undergone a process to significantly reduce its lipid content. This type of FBS is designed for research applications where the presence of lipids can interfere with experimental outcomes.	**LIPID/CHOLESTEROL METABOLISM STUDIES:** To investigate cellular lipid metabolism without the influence of exogenous lipids **DRUG DEVELOPMENT:** To assess the effects of compounds on lipid metabolism or lipid-related cellular processes	Inhibition of EGFR Overcomes Acquired Lenvatinib Resistance Driven by STAT3–ABCB1 Signaling in Hepatocellular Carcinoma	*Cancer Research*	 Scan to view product
			Restriction of extracellular lipids renders pancreatic cancer dependent on autophagy	*Journal of Experimental & Clinical Cancer Research*	
			Targeting of the lipid metabolism impairs resistance to BRAF kinase inhibitor in melanoma	*Frontiers in Cell and Developmental Biology*	
			Brahma related gene 1 (Brg1) regulates cellular cholesterol synthesis by acting as a co-factor for SREBP2	*Frontiers in Cell and Developmental Biology*	
			Trafficking of cholesterol to the ER is required for NLRP3 inflammasome activation	*Journal of Cell Biology*	

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S181M Fetal Bovine Serum (FBS) South America, **E.V. Depleted**	Proprietary ultrafiltration method to deplete extracellular vesicles (95% or more).	**EXOSOME RESEARCH:** To study the effects of specific exosomes without interference from bovine-derived EVs **CELL-CELL COMMUNICATION STUDIES:** To investigate direct cell-cell communication without the confounding effects of EV-mediated signaling **DRUG DELIVERY STUDIES:** To evaluate the uptake and efficacy of drug-loaded exosomes without interference from serum-derived EVs **microRNA STUDIES:** To accurately study miRNA profiles, functions, and therapeutic potential within specific exosome subtypes	Serum starvation-based method of ovarian cancer cell dormancy induction and termination in vitro	*Biology Methods and Protocol*	 Scan to view product
			A spinach O-acetylserine(thiol)lyase homologue, SoCSaseLP, suppresses cysteine biosynthesis catalysed by other enzyme isoforms	*Biochimie Open*	
			Role of Temperature-Dependent Interfacial Tension on Shear Wave Velocity for Energy Geosystems	*Sensors*	
			Droplet Spectra Broadening in Cumulus Clouds. Part II: Microscale Droplet Concentration Heterogeneities	*Journal of the Atmospheric Sciences*	
			Efficient production of bispecific IgG of different isotypes and species of origin in single mammalian cells	*mAbs*	
			Structure of Soybean β-Cyanoalanine Synthase and the Molecular Basis for Cyanide Detoxification in Plants	*The Plant Cell*	
S181R Fetal Bovine Serum (FBS) South America, **Iron Supplemented**	Iron supplemented serum has been fortified with iron to meet the increased iron requirements of certain cell types. Iron is an essential micronutrient involved in various cellular processes, including oxygen transport, energy production, and DNA synthesis.	**ERYTHROID CELL CULTURE:** Cells involved in red blood cell production have high iron demands. Iron-supplemented FBS can enhance their growth and differentiation **IRON-DEPENDENT CELL LINES:** Certain cell lines exhibit increased sensitivity to iron availability. Supplementation can improve their proliferation and viability **HYPOXIC CONDITIONS:** In low-oxygen environments, iron supplementation can support cellular adaptation and survival **STUDIES OF IRON METABOLISM:** To investigate the effects of iron availability on cellular processes	*No Open-Source Publications As Of Jul 2024*		 Scan to view product

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S181S Fetal Bovine Serum (FBS) South America **Origin, Embryonic Stem Cells tested**	Each batch of serum is pre-screened for (i) Seeding efficiency and proliferation (ii) Morphology (iii) Pluripotency markers Pre-screened to minimise the need for evaluating serum lots.	(a) For Induced pluripotent stem cells (iPSCs) (b) Embryonic stem cells (ESCs) studies (c) For cellular reprogramming (d) For embryonic development studies	Alpha-catulin, a new player in a rho dependent apical constriction that contributes to the mouse neural tube closure	*Frontiers in Cell and Developmental Biology*	
			Catulin based reporter system to track and characterize the population of invasive cancer cells in the head and neck squamous cell	*International Journal of Molecular Sciences*	
			Mild replication stress causes premature centriole disengagement via a sub-critical Plk1 activity under the control of ATR-Chk1	*Nature Communications*	
			Automated digital image quantification of histological staining for the analysis of the trilineage differentiation potential of mesenchymal stem cells	*Stem Cell Research & Therapy*	Scan to view product
			LINE-1 RNA triggers matrix formation in bone cells via a PKR-mediated inflammatory response	*The EMBO journal*	
S181T Fetal Bovine Serum (FBS) South America, **Tetracycline Free**	Tetracycline Free Serum has been specifically tested and certified to be close to free from tetracycline and its derivatives. Tetracycline is an antibiotic that can interfere with the function of tetracycline-inducible gene expression systems, commonly used in molecular biology research.	Commonly used when the presence of tetracycline is not desired such as: **GENE EXPRESSION SYSTEMS RESEARCH:** Tet-induced gene expression assays **MICROBIOLOGY AND ANTIBIOTICS RESEARCH:** Antibiotic sensitivity testing and Microbiome studies **DRUG DISCOVERY AND DEVELOPMENT:** Studying drug interactions	Novel non-HAP class A HBV capsid assembly modulators have distinct in vitro and in vivo profiles	*Journal of Virology*	
			Mild replication stress causes premature centriole disengagement via a sub-critical Plk1 activity under the control of ATR-Chk1	*Nature Communications*	
			Metabolic memory underlying minimal residual disease in breast cancer	*Molecular Systems Biology*	
			miR-27a/b is a post transcriptional regulator of Gpr126 (Adgrg6)	*Annals of the New York Academy of Sciences*	Scan to view product
			An inhibitor-mediated beta-cell dedifferentiation model reveals distinct roles for FoxO1 in glucagon repression and insulin maturation	*Molecular Metabolism*	

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