

Cell and Gene Therapy Solutions

Discovery | Clinical Trials | Scale-Up | cGMP Production

Find product and service solutions for your cell and gene therapy programs to help you bring individualized treatments for previously incurable diseases to patients faster. Explore these checklists and resources to help you optimize every step of your workflow, including process development, scale-up, and commercial manufacturing.



Analytical Formulation and Process Development

Facility Construction

Technology Transfer, Process Validation, and Scale-Up

Commercial Manufacturing

Quality Control

Cell Isolation Checklist

Have these products ready to help you identify and/or isolate target cells or genes that need to be modified or replaced for disease treatment.



Cell separation reagents: Antibodies, specific ligands conjugated to magnetic beads or fluorescent dyes

Cell separation instruments: Magnetic-activated cell sorting (MACS) systems, fluorescence-activated cell sorting (FACS) machines, and microfluidic devices

Cell culture media and supplements: Basal media, growth factors, cytokines, serum, additives

Cell isolation consumables: All-purpose and centrifuge tubes, plates, and filters

Cell isolation kits: Optimized buffers, separation reagents, etc.

Cell analysis tools: Flow cytometers, microscopes, and gene expression analysis kits

Cell Engineering Checklist

You may need these reagents and kits to perform cell and gene therapy engineering techniques like TALEN and CRISPR-Cas9, lentiviral and nonviral gene delivery, and other applications to modify your cells and cell lines specifically and effectively.



Gene editing tools: CRISPR-Cas9, TALENs, or zinc finger nucleases

Gene delivery systems: Viral vectors (lentiviral or adenoviral vectors) or non-viral electroporation, lipofection, and nanoparticle-based delivery systems

Gene expression systems: Promoters, regulatory elements, and expression vectors

Cell culture media and supplements: Basal media, growth factors, cytokines, and supplements, including sera or specialized cell culture additives

Cell analysis tools: PCR, qPCR, flow cytometry, and microscopy equipment and accessories and gene expression analysis kits

Quality control and validation tools: Functional and cell-based assays and genomics essentials

Safety and regulatory tools: Tests for endotoxin levels or mycoplasma contamination

Cell Expansion Checklist

Stock up on specialized culture media, sera, and other supplements to help support the growth, expansion, and maintenance of your cells and cell lines.



Cell culture media: Media enriched with essential nutrients, growth factors, and supplements

Cell culture vessels: Tissue culture flasks, plates, cell culture stack, and bioreactors for adherent or suspension methods

Cell culture supplements: Sera or sera alternatives, growth factors, cytokines, and extracellular matrix components

Cell expansion reagents: Cell cycle regulators or mitogens

Equipment and instruments: Incubators, centrifuges, pipettes, and other basic laboratory equipment

Cell counting and viability assessment tools: Automated cell counters, hemocytometers, and trypan blue staining kits

Quality control and characterization tools: Flow cytometers, gene expression analysis kits, and functional assays

Incubators: Environmental chambers, direct-heat or water-jacketed CO₂ incubators, and dry block, shaking, hybridization, and refrigerated incubators

Fill/Finish Checklist

Replenish your supply of filling containers, controlled environment essentials, and quality control solutions for monitoring the purity, safety, and effectiveness of your final products according to cGMP.



Containers and closure systems: Vials, syringes, bags, caps, stoppers, seals, and other containers

Fluid transfer systems: Tubing, connectors, and pumps

Sterilization and cleaning supplies, and chemicals: Autoclaves, filters, and cleaning, disinfecting, and sanitizing agents

Contamination control PPE: Cleanroom gowns, sleeve covers, gloves, sterile gloves, shoe covers, captive shoes, facility socks, hair covers, face masks, safety glasses, goggles, etc.

Quality control and testing materials: Reagents, test kits, sampling devices, and laboratory supplies

Packaging and labeling materials: Boxes, trays, secondary containers, labels, barcodes, and serialization systems



Helping our customers accelerate innovation and enhance productivity

Cryopreservation Checklist

Be prepared with cryopreservation media suitable for maintaining the integrity of your biologics, including controlled rate freezers, cryogenic storage systems, retrieval systems, and other items for safely preserving your in-process and final products.

Cryoprotectants: Dimethyl sulfoxide (DMSO), glycerol, and ethylene glycol

Cryovials, cryotubes, and labels

Cryogenic freezers

Cryo storage boxes and racks

Labeling and tracking systems

Personal protective equipment (PPE): Cryo gloves, lab coats, face shields, etc.



Featured Brands



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Additional Resources



Production Workflow Products and Services

Browse production products from top brands and value-added services to support every stage of your workflow. Choose from a wide selection of chemicals, personal protective equipment, single-use technologies, and more that satisfy the highest quality standards and regulatory requirements essential to your application from discovery to the final product.

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Technical Resources

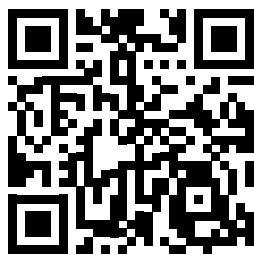
 [U.S. Food and Drug Administration Cell & Gene Therapy Guidelines](#)

 [Health Canada Guidance Documents: Biologics, Radiopharmaceuticals, and Genetic Therapies](#)

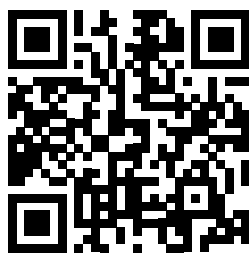
 [American Society of Gene + Cell Therapy](#)

 [ANSI/PDA Standard 02-2021: Cryopreservation of Cells for Use in Cell Therapies, Gene Therapies, and Regenerative Medicine Manufacturing](#)

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