



### T-Cell Culture Medium

PRIME-XV T Cell CDM is an animal component-free medium for T-cell culture. The medium has been developed to maximize consistent growth of T cells while maintaining their functionality and therapeutic potential. An important trend in cell-culture media for gene therapies and immunotherapies is the move away from animal-derived and undefined components to serum-free, animal component-free, and chemically defined culture conditions. When working with T cells, the advantage of this is twofold: Animal-derived components are variable between lots, and the naturally occurring cytokines and

growth factors in them can result in undesirable effects. For example, cytokines and growth factors have been shown to impact growth, phenotype, and the potential of T cells to polarize into therapeutic subtypes. PRIME-XV T Cell CDM removes this variability to provide more consistency between lots. Chemically defined media (CDM) also reduce the risk of introducing foreign agents or impurities from undefined components, thereby facilitating scale-up to commercial production and the regulatory submission process.

#### Irvine Scientific

For info: 800-577-6097  
www.irvinesci.com

### TIGIT Receptor Products

AMS Biotechnology (AMSBIO) has TIGIT receptor products for immunotherapy research. Human T-cell immunoreceptor with immunoglobulin (Ig) and immunoreceptor tyrosine-based inhibition motif (ITIM) domains—TIGIT—is a receptor expressed on the surface of human T cells and natural killer cells that binds to CD155 and CD112 present on the surface of dendritic cells. Antibodies and other agents that inhibit this signaling pathway increase the immune response, particularly in certain cancers. A recombinant Jurkat cell line that constitutively expresses a full-length human TIGIT and a firefly luciferase gene under the control of nuclear factor of activated T-cell (NFAT) response elements is available to identify antagonistic monoclonal antibodies. Two TIGIT homogeneous assay kits measure the inhibition of TIGIT binding to CD112 (PVRL2/Nectin-2) and CD155, respectively. AMSBIO has also launched Fc Fusion TIGIT and biotinylated Fc Fusion TIGIT recombinant proteins for protein-binding studies and for screening small molecules and antibodies.

#### AMS Biotechnology

For info: +44-(0)-1235-828200  
www.amsbio.com

### Antigen-Specific T-Cell Reagents

To aid in the identification of antigen-specific T cells, BioLegend is proud to launch Flex-T Major Histocompatibility Complex (MHC) tetramers, a novel technology licensed from Sanquin Blood Supply Foundation. The T-cell-mediated immune response is defined by the interaction between antigen-presenting cells and T cells, through the MHC and the T-cell receptor (TCR). MHC molecules present a peptide to antigen-specific T cells that recognize this peptide. Soluble, monomeric MHC molecules bind very weakly to the TCR. However, by making a tetramer using a fluorescently labeled streptavidin conjugate, the complex has greater avidity to the T cell and maintains more stable binding by interacting with several TCRs, making it useful for flow cytometry detection of antigen-specific T cells. Flex-T has the unique property of

allowing the loading of peptides of interest into the binding site of the MHC groove, by using UV light-labile, exchangeable peptides.

#### BioLegend

For info: 877-246-5343  
www.biolegend.com

### Gold Nanoparticles

InnovaCoat GOLD 40-nm nanoparticles enable customers to quickly generate highly stable, covalent gold-antibody conjugates at R&D and manufacturing scales. The InnovaCoat GOLD carboxyl surface is optimized for single-step EDC (1-Ethyl-3-(3-dimethylaminopropyl)carbodiimide) covalent coupling without signs of aggregation, and eliminates the need for EDC/NHS (N-Hydroxysuccinimide) preactivation and washing steps associated with traditional conjugations. The process is also significantly faster than standard methods, with conjugates ready to use in less than 35 minutes. InnovaCoat GOLD carboxyl nanoparticles have a narrow size distribution, a uniform spherical shape, and a high batch-to-batch consistency.

#### Innova Biosciences

For info: +44-(0)-1223-661000  
www.innovabiosciences.com

### Multiplex Immunoassays

Abcam's multiplex immunoassays combine Firefly hydrogel technology with high-performance antibodies to simultaneously measure up to 75 different proteins in only 12.5  $\mu$ L of sample. With sensitivity below 1 picogram/mL, the assay can provide multiplex data within hours, even in complex matrices with low target concentrations. Unlike many other multiplex assays that are bead-based, these assays can be run on most common flow cytometers, deliver 4–5 logs of linear dynamic range, and include free, easy-to-use analysis software. Additionally, researchers can choose from a growing menu of analytes to create a customized, ready-to-use panel to analyze complex inflammatory responses to diseases or treatments. Thanks to shared antibody pairs, users can seamlessly switch between Abcam's 90-minute SimpleStep ELISA assays and multiplex immunoassays while maintaining high correlation. For even more flexibility, Abcam offers its multiplex immunoassays as both a convenient service and as kits for researchers to employ in their own labs.

#### Abcam

For info: 888-772-2226  
www.abcam.com/multipleximmunoassay

### Fc Receptor Reagents

Sino Biological offers a comprehensive set of tools for Fc receptor-related studies, including recombinant proteins, antibodies [rabbit monoclonal antibodies (mAbs), mouse mAbs, and rabbit polyclonal antibodies (pAbs)]; ELISA kits; and Open Reading Frame (ORF) complementary DNA clones. Fc receptors are proteins belonging to the immunoglobulin superfamily that contribute to the protective functions of the immune system, and are found on the surface of certain cells—including B lymphocytes, natural killer cells, macrophages, neutrophils, and mast cells. Their name is derived from their binding specificity for a part of an antibody known as the fragment crystallizable (Fc) portion. Fc receptors bind to antibodies that are attached to infected cells or invading pathogens. There are many kinds of Fc receptors, which are named based on the type of antibody that they recognize. Their activity stimulates phagocytic or cytotoxic cells to destroy microbes or infected cells by antibody-mediated phagocytosis or antibody-dependent cell-mediated cytotoxicity. Over 9,000 quality antibody products for scientists are in stock.

#### Sino Biological

For info: +86-400-890-9989  
www.sinobiological.com

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# Science

## New Products

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