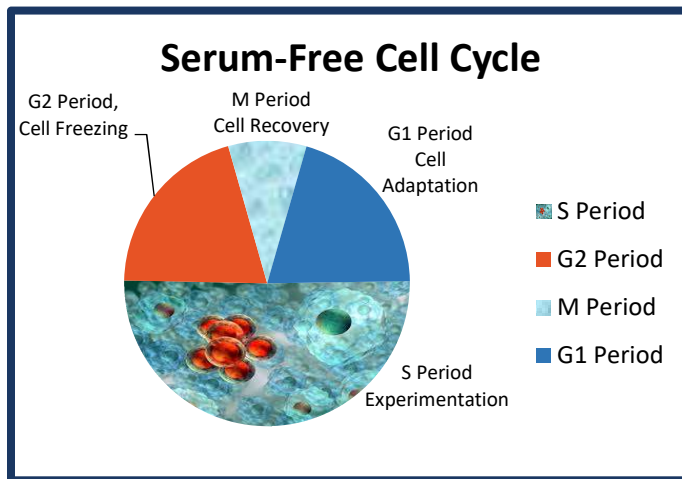


Protide's Serum-Free Technology Overview

Our Serum-Free technology improves the physiological condition of cells



Protide's discovery of the Serum-Free Cell Cycle has permitted scientists to study cellular phenomena, cryopreserve and recover cells completely under serum-free conditions. For example, growth factors and steroid hormones can now effectively be studied both in their presence and absence. Cell secreted proteins can be highly purified without the interference of contaminating components such as serum. Overall, by controlling the in vitro environment, (most importantly the growth media), the biological data generated will be consistent and reliable.

Because of our technological advances, the Protide products TCM™, TM-235™ and TCH™ DO NOT contain

- Growth Factors (e.g. TGF, FGF, EGF, etc.)
- Steroid Hormones (e.g. estrogen, testosterone)
- Glucocorticoids (e.g. hydrocortisone)
- Cell Adhesion Molecules (e.g. laminin, fibronectin, collagen)

The Result of our technology is the elimination of:

- Viruses
- Bacterial Toxins
- Proteases
- Contaminating Ig
- High Endotoxin levels
- Mitogens
- DMSO and serum for cryopreservation

Product Highlights

- | |
|---|
| • Defined composition formulated with known components and concentrations |
| • Lot-to-lot consistency to eliminate the need for lot qualifications |
| • Rigorous quality control that not only meets but exceeds cGMP |
| • Easier product purification for increased product yield-low protein |
| • A cost-effective alternative to traditional serum-based or serum-free media |

TCM™

General purpose serum replacement for many cell types from a variety of species. The bovine albumin and transferrin are highly purified and heat treated. The final total protein concentration is less than 0.1%. TCM™ is packaged as a 50X concentrate.

- Catalog No. 1001 size 40ml – produces 2 liters of complete growth medium
- Catalog No. 1002 size 100ml – produces 5 liters of complete growth medium
- Catalog No. 1005 size 500ml produces 25 liters of complete medium

TM-235™

Has similar properties as TCM™, however, contains additional components for cells which require serum concentrations (e.g. fetal bovine serum) higher than 10%. The final total protein concentration is less than 0.1%. The bovine albumin and transferrin are highly purified and heat treated. TM-235™ is packaged as a 50X concentrate.

- Catalog No. 2001 size 40ml produces 2 liters of complete medium
- Catalog No. 2002 size 100ml produces 5 liters of complete medium
- Catalog No. 2005 size 500ml produces 25 liters of complete medium

TCH™

Primarily for human cells and the production of cell secreted proteins. TCH™ is also effective in culturing other mammalian cells without the use of animal proteins. TCH™ is packaged as a 50X concentrate.

- Catalog No. 3001 size 40ml produces 2 liters of complete medium
- Catalog No. 3002 size 100ml produces 5 liters of complete medium
- Catalog No. 3005 size 500ml produces 25 liters of complete medium
- Custom Sizes Available – Please contact Customer Service for information

HemaPro™

Ex Vivo Reagent

Is a serum-free clonogenic medium for the culturing of human progenitor cells. Does not contain erythropoietin, recombinant growth factors, or fetal bovine serum. Effective in studying stimulatory factors.

- Catalog No. 3300 size 40ml produces 2 liters of complete medium
- Catalog No. 3303 size 100ml produces 5 liters of complete medium

Cellvation™

Is a unique cryopreservation medium which eliminates the problems associated with DMSO such as cytotoxicity, morphological differentiation and the adventitious components found in serum. Cellvation™ is convenient to use, provides optimal recovery while eliminating preparation and centrifugation steps and can be used for cells cultured in serum free medium or with serum containing medium.

- Catalog No. 5001 size 60ml (1X concentrate)

pZerve™

Is a cryopreservation solution that does not contain dimethylsulfoxide (DMSO), fetal bovine serum or other animal protein. Optimal recovery is achieved through elimination of these harmful components. pZerve™ is ready to use, does not require any dilution or further processing and can be used for cells cultured in serum free medium or with serum containing medium.

- Catalog No. 5700 size 60ml (1X concentrate)

All products are available in Custom Sizes – Please contact Customer Service for information

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