



cellgro FREE™

A proprietary serum-free/protein-free growth medium without hormones or growth factors developed specifically for the cultivation and maintenance of Chinese hamster ovary (CHO) cells *in vitro*. Advanced formulation requires minimal adaptation from current serum-containing culture medium.

Serum has been extensively used as a supplement to chemically defined media for mammalian cell culture due to its beneficial attributes. However, there are many negative aspects associated with the use of serum in the production of recombinant proteins, viral vaccines, and monoclonal antibodies. Therefore, the development of serum-free/protein-free media formulations has become essential.

Chinese hamster ovary (CHO) cells transfected with various genes are widely used to produce recombinant proteins in adherent monolayer culture and in suspension culture. cellgro FREE™ is a proprietary serum-free/protein-free growth medium without hormones or growth factors optimized for cultivation of CHO cells as well as many derivatives of this parent line. Protein-free formulation simplifies separation/purification and downstream processing of recombinant proteins and minimizes problems associated with the use of serum, such as time consuming sampling, lot-to-lot variability, presence of adventitious agents, and availability. Specifically formulated without L-glutamine to support glutamine synthetase expression systems, the advanced proprietary composition supports superior growth and viability over long-term passages in both adherent and suspension culture, and requires minimal adaptation saving valuable research time.

Procedure

Two protocols have been established for the adaptation of both suspension and adherent cells from serum-containing media into cellgro FREE™.

Method A:

- Pass cells growing in the serum-supplemented medium into a 1:1 mixture of the original medium and cellgro FREE™ at approximately 3 to 5×10^6 cells/mL. Incubate the culture at 37°C in a humidified atmosphere of 5-10% CO₂ in air. Allow cell density to reach in excess of 1×10^6 cells/mL.
- After one passage in the 1:1 mixture, sub-culture cells into cellgro FREE™ only.

Method B:

- Add serum to a small aliquot of cellgro FREE™ at the same concentration as in the original medium. Pass cells from the original serum-containing medium into this mixture at approximately 3 to 5×10^6 cells/mL. Incubate the culture at 37°C in a humidified atmosphere of 5-10% CO₂ in air. Allow cell density to reach in excess of 1×10^6 cells/mL.
- After one passage in the serum-containing mixture, sub-culture cells into cellgro FREE™ only.

NOTE: Anchorage-dependent cells can also be adapted to serum-free/protein-free medium using the methods above. However, the removal of the cells from their culture vessel should be performed using a non-enzymatic cell dissociation solution, i.e. Cellstripper™. Under no circumstances should trypsin or other enzymatic solutions be used without the addition of a trypsin inhibitor. Due to the absence of the serum, which would contain trypsin inhibitors, the cells could be irreparably damaged.

Product Description	Catalog No.	Size
cellgro FREE™ without L-glutamine and phenol red	40-200-CV	6 x 500 mL
Cellstripper™ Non-enzymatic Cell Dissociation Solution	25-060-CI	6 x 100 mL