

ClonaCell™-CHO AOF Supplement



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**Animal origin-free, serum-free, L-glutamine-free, and phenol red-free
40X culture supplement for cloning during CHO cell line development**

Catalog #100-0382

2.5 mL

Product Description

ClonaCell™-CHO AOF Supplement is a serum-free and animal origin-free (AOF) supplement that is added to a base medium to increase cloning efficiency and promote robust outgrowth of Chinese hamster ovary (CHO) cells. The 40X supplement can be added to a variety of protein-free liquid or semi-solid cell culture media to increase the growth and single-cell cloning efficiency of CHO cells. ClonaCell™-CHO AOF Supplement contains recombinant proteins and chemically defined components, and does not contain animal-derived components, serum, hydrolysates, L-glutamine, phenol red, or selection agents. This supplement offers improved imaging clarity compared to ClonaCell™-CHO ACF Supplement (Catalog #03820), and is formulated with no animal-derived raw materials to the secondary level of manufacturing.

Properties

Storage: Store at 2 - 8°C. Do not freeze.

Shelf Life: Stable until expiry date (EXP) on label.

Contains:

- Recombinant proteins
- Chemically defined components

Product is light sensitive and should be kept in the dark whenever possible. Minimal precipitate may be observed over time; this will not affect performance.

Directions For Use

SUPPLEMENTATION OF LIQUID/SEMI-SOLID MEDIUM

1. Mix ClonaCell™-CHO AOF Supplement by inverting the tube several times.
2. Add selective agents and/or other compounds (e.g. L-Glutamine [Catalog #07100] or G418 [Catalog #03812]) to a base medium suitable for CHO cell culture (e.g. ClonaCell™-CHO CD Liquid Medium [Catalog #03817] or semi-solid ClonaCell™-CHO CD Medium [Catalog #03815]).
3. Add ClonaCell™-CHO AOF Supplement at a 1 in 40 dilution to the base medium. Mix thoroughly.
For example, add 2.5 mL of ClonaCell™-CHO AOF Supplement to 97.5 mL of protein-free CHO cell culture medium.

For optimal performance, prepare the supplement-containing (complete) medium shortly before use. Depending on the base medium chosen, the complete medium may be stored at 2 - 8°C for up to 1 week before use.

NOTE: Dilutions other than 1 in 40 may be used. Titration of the supplement may be required to determine the optimal dilution for specific cells and applications.

Data

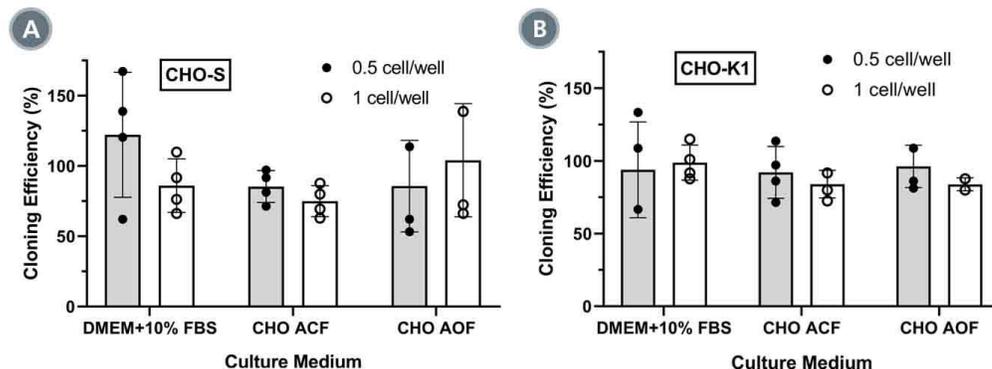


FIGURE 1. Cloning Efficiencies for Subcloned CHO-S and CHO-K1 Cells

CHO-S (A) and CHO-K1 (B) cells were subcloned by limiting dilution in DMEM + 10% FBS, or ClonaCell™-CHO CD Liquid Medium containing either ClonaCell™-CHO ACF Supplement or ClonaCell™-CHO AOF Supplement; all conditions contained 6 - 8 mM L-glutamine. Individual wells of 96-well plates were seeded with an average of 0.5 or 1 cell per well in 200 μ L culture medium. After incubation for 14 days (37°C, 5% CO₂) the plates were examined under a microscope and assessed for growth, with wells containing > 100 cells considered positive for outgrowth. The cloning efficiency was estimated by Poisson statistics using the ELDA method described by Hu & Smith (2009). Data are shown as mean \pm 1 SD for n = 4 independent experiments.

References

- Hu Y & Smith GK. (2009) ELDA: extreme limiting dilution analysis for comparing depleted and enriched populations in stem cell and other assays. *J Immunol Methods* 347(1-2): 70-8.
- Neumann G. (2016) Downstream process development and preliminary formulation development for the bispecific antibody NF-CU N297Q for a clinical phase I/IIa trial. Dissertation, University of Tübingen.

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