

Certificate of Analysis

ENDOTHELIAL CELL GROWTH SUPPLEMENT

Developed first as a growth stimulator of human and animal vascular endothelial cells,^{1,2} Endothelial Cell Growth Supplement (ECGS) has subsequently proven to be among the most broadly applicable culture medium growth supplements. ECGS is an effective cell attachment and mitogenic extract for the cloning and proliferation of hybridomas without feeder cells.³ ECGS also replaces cell feeder layers in clonal growth of hamster embryo cells⁴ and is beneficial for the culture of many other cell types, including human keratinocytes,⁵ mouse BALB/c-3T3 cells, and human pituitary cells. A tissue extract, ECGS contains a number of growth factors, including Fibroblast Growth Factor and Endothelial Cell Growth Factors alpha and beta.

PRODUCT: Endothelial Cell Growth Supplement (ECGS)

CATALOG NUMBER: 354006 **LOT NUMBER:** 9112012

SOURCE: Bovine neural tissue

QUANTITY: 15 milligrams ECGS per vial

FORMULATION: Lyophilized from NaCl-containing buffer with streptomycin sulfate.

RECONSTITUTION AND USE: Allow vial to equilibrate to room temperature. Wipe top of vial with 70% ethanol, and flame or air dry. Using aseptic technique, add 1 to 5 ml sterile serum-free medium. Dissolve product and mix solution thoroughly by gentle aspiration with a sterile pipette. If entire contents of vial are not to be used immediately, transfer aliquots to sterile plastic tubes, and store at -20°C. It is recommended that solubilized product is used within 1 month. **DO NOT STORE IN FROST-FREE FREEZER. AVOID MULTIPLE FREEZE THAWS.**

It is recommended that ECGS be used at a concentration of 50 to 150 micrograms per ml of medium. For perpetuation of some primary cell types, it may be necessary to supplement your growth medium with heparin at approximately 1-10 u/ml or 10 - 100 ug/ml (based on protein with a specific activity of 176 u/mg).

QUALITY CONTROL: 150 ug/ml of this lot of ECGS supported the growth of Fetal Bovine Heart Endothelial cells (ATCC CRL 1395) 1 . 4 fold over no ECGS controls in 7 days. (Cells were fed at 2 or 3 and 5 days.)

Endothelial Cell Growth Supplement is lyophilized from a membrane-filtered (0.20 micron) solution. It has been tested and found negative for the presence of bacteria, fungi and mycoplasma.

STORAGE: Stable when stored at 2-8°C. **DO NOT FREEZE.**

EXPIRATION DATE: July 07, 2021

REFERENCES:

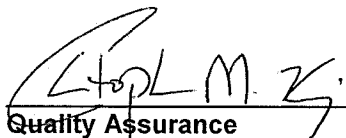
1. Maciag, T., et.al., Proc. Natl. Acad. Sci., USA **76**:5674 (1979).
2. Folkman, J. and Haudenschild, C., Nature, **288**:551 (1980).
3. Pintus, C., et.al., J. Immunol. Meth., **61**:195 (1983).
4. Evans, C.H., and DiPaolo, J.A., J. of Natl Cancer Inst., **68**:127 (1982).
5. Gilchrest, B.A., et.al., J. Cell Physiol., **120**:377 (1984).

SAFETY RECOMMENDATION: Handle in accordance with good industrial hygiene and laboratory safety practices.

California Proposition 65 Notice

WARNING:	This product contains a chemical known to the state of California to cause birth defects and/or other reproductive harm.
Component:	Streptomycin Sulfate

Use restriction for Europe and the United Kingdom: This product may only be used as in *in-vitro* laboratory reagent. This product and its residue must not be allowed to come into contact with ruminating animals or swine.



Quality Assurance

June 13, 2019
Date