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Endothelial Cell Growth Factor (ECGFpro1) **(For cultivation of blood endothelial cells, BEC)**

Description: Endothelial cell growth factor (ECGF) is an extract of bovine brain containing growth promoting factors for vascular endothelial cells of mammalian origin. Endothelial cell growth factor is prepared using a modification of the method of Maciag, et al. (1979) lyophilized from a sterile solution containing NaCl and streptomycin sulfate. **ECGFpro1 is supplemented with recombinant human VEGF₁₆₅ (corresponding to 10ng/ml) a concentration sufficient for the cultivation of blood vascular endothelial cells like HUVEC and HMVEC.**

Endothelial cells from human umbilical vein (HUVEC) can be established as primary cultures by traditional methods. The serial propagation of these cells has proved to be difficult. The long-term propagation of these cells in vitro can be achieved with an extract prepared from bovine brain. The introduction of a fibronectin or collagen matrix to the cell culture system allows cultivating endothelial cells at clonal densities. With ECGF, the FCS requirement can be reduced. Heparin potentiates the mitogenic activity of crude preparations of ECGF. ECGF has also been reported to eliminate the need for feeder cells in the clonal growth of hybridomas and other cell types.

Host species:	Bovine (BSE-free tested!)
Purification:	Crude extract
Additional Factor:	rh-VEGF ₁₆₅ (final concentration: 10 ng/ml)
Heparin:	2.5 mg/mg ECGF
Buffer:	H ₂ O, w/o preservative
Formulation:	lyophilized
Use:	for 500 ml endothelial growth medium

Reconstitution and Use: Endothelial cell growth factor is supplied as a sterile lyophilized powder containing 6 mg protein per vial. To obtain a stock solution reconstitute the contents of the vial in 2 ml of prewarmed (37 °C) sterile balanced salt solution. Gently rotate the vial until the contents are dissolved. This stock solution may be further diluted in sterile tissue culture media to obtain the desired working concentrations. Although the stock solution can be added aseptically to sterile tissue culture medium, it is recommended that medium containing diluted product is aseptically filtered prior to use. **The ECGF + VEGF-A are sufficient for 500 ml growth medium.**

Biological activity/ Working concentration: Optimum concentration for human umbilical vein endothelial cells (HUVEC) range from 50-200 µg/ml, optimal concentration with heparin (50 µg/ml) is about 10 µg/ml.

Species specificity: Bovine ECGFpro1 is effective on mouse, bovine and human cells.

Storage

Prior to reconstitution store vial at 2-8 °C. After reconstitution, the product may be stored as aliquots at -20 °C. It is recommended to store the reconstituted solution in aliquots at -20°C. **Repeated freezing and thawing should be avoided.**

Usage: Bovine ECGFpro1 is offered for research use. Not for drug use. **Not for human use!**

Catalogue Number: 300-090H-B

Size: 6 mg

Literature: [Maciag T (1982) JBC 257:5333; Olander J (1980) In Vitro 6:209; Folkman J (1980) Nature 288:551; Evans CH (1982) JNCI 68:127; Pintus C (1983) J Immuno Meth 61:195; Maciag T (1979) PNAS 6:5674; Thornton SC (1983) Science 222:623; Ransom JH (1986) Methods Enzymol 121:293].