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Bovine Endothelial Cell Growth Factor (ECGF)

Bovine Endothelial Cell Growth Factor (ECGF)
(Cell culture grade + Heparin)

Product Description:

Endothelial cell growth factor (ECGF) is an extract normally prepared from bovine brain containing growth promoting factors. ECGF has also been reported to be beneficial as a media supplement for the fusion and growth of hybridoma cells in monoclonal antibody production. 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. 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 mainly from bovine or if needed from porcine brain.
ECGF contains growth promoting factors e.g. bFGF for vascular endothelial cells of mammalian origin.
The introduction of a fibronectin or collagen matrix to the cell culture system allows to cultivate 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.

References

1. Maciag T (1982) JBC 257:5333
2. Olander J (1980) In Vitro 6:209
3. Folkman J (1980) Nature 288:551
4. Evans CH (1982) JNCI 68:127
5. Pintus C (1983) J Immuno Meth 61:195
6. Maciag T (1979) PNAS 6:5674
7. Thornton SC (1983) Science 222:623
8. Ransom JH (1986) Methods Enzymol 121:293
9. Schniedermann et al. BMC Cell Biology 2010

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.

Avoid repeated freeze and thaw cycles.

Product Information

Catalogue number:	PB-ECGF-1 Heparin - 6 mg (sufficient for 500 ml medium)
Activity / Concentration:	Optimum concentration for human umbilical vein endothelial cells (HUVEC) range from 5-20 µg/ml, optimal concentration with heparin (50 µg/ml) is about 12 µg/ml. As a growth supplement for use in monoclonal antibody production the optimum range is 25 to 100 µg/ml.
Species specificity:	Bovine ECGF Heparin is effective on mouse, bovine and human cells.
Host species:	bovine **(BSE-free tested!)**

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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.

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Product Specification:

Host species:	bovine (BSE-free tested)
Purification:	Crude extract
Heparin:	2,5 mg/mg ECGF
Buffer:	H_2O, w/o preservative
Formulation:	Freeze dried
Grade:	

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