Porcine Endothelial Cell Growth Factor (ECGF)
(Cell culture grade)

20190620BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**300-092**
Size:	6 mg
Lot. No.:	According to product label
Country of origin:	Germany

Product Information

Endothelial cell growth factor (ECGF) is an extract of porcine brain containing growth promoting factors for vascular endothelial cells of mammalian origin. 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). 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 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

Product Specification

Host species	porcine
Purification	Crude extract
Buffer	H_2O, w/o preservative
Formulation	Freeze dried
Grade	**Cell culture tested!**

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 PBS or water. 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.

NOTE: *Because ECGF is a crude extract it might be that the solution is not fully clear after reconstitution. However this has no influence on the activity!*

Biological activity: The working concentration of ECGF for HUVEC is in the range of 25µg/ml to 100µg/ml. When adding Heparin (2.5mg per mg ECGF) an ECGF concentration of 12µg/ml (30µg/ml Heparin) is optimal. In this case 6mg ECGF are sufficient for 500 ml medium.

Species specificity: Porcine ECGF is effective on rat, 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.

AVOID REPEATED FREEZE AND THAW CYCLES!

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Handling/Application

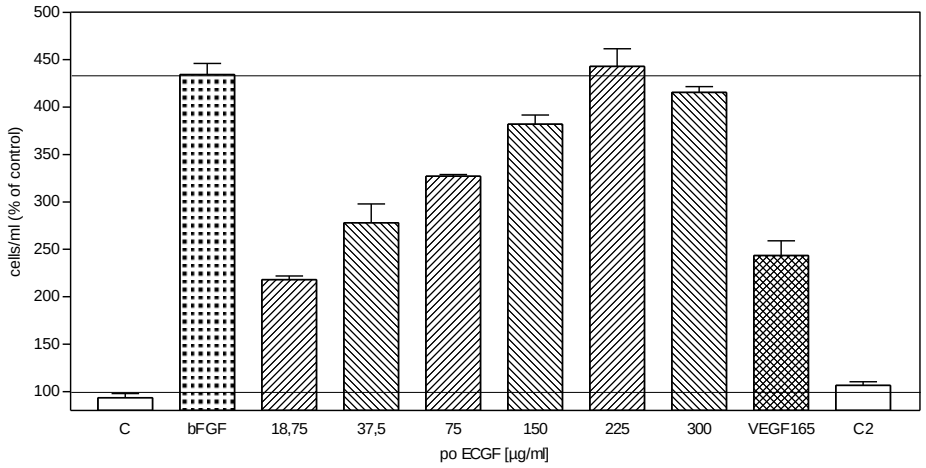

Figure 1. Proliferation assay with primary HUVECs. Serum-starved HUVECs (2% FCS) were stimulated with increasing amounts of porcine ECGF. Human $VEGF_{165}$ and FGF-2 (basic FGF) were used as positive controls.