3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-Fibroblast Growth Factor-Acidic
produced in rabbit, IgG fraction of antiserum

Catalog Number **F5521**

Product Description

The antiserum is produced in rabbit using highly purified native bovine acidic fibroblast growth factor (aFGF) as the immunogen. The antibody is purified by protein A affinity chromatography.

Fibroblast Growth Factor-Acidic (aFGF) is a potent mitogenic agent for a wide variety of mesoderm-derived cells including BALB/c 3T3 fibroblasts, capillary and endocardial endothelial cells, myoblasts, vascular smooth muscle cells, mesothelial cells, glial and astroglial cells, and adrenal cortex cells.[1,2] In cells not growth inhibited by heparin (such as baby hamster kidney cells), heparin potentiates the actions of aFGF, but in cells inhibited by heparin (such as bovine brain-derived capillary endothelial cells), no such potentiation is observed.[3] The closely related protein Fibroblast Growth Factor-Basic (bFGF) acts upon the same cellular receptors as aFGF but with different specific activities, depending on the cell type.[4] These two mitogens may play important roles *in vivo* in cell proliferation and differentiation associated with embryogenesis, tissue regeneration, CNS development, wound healing, angiogenesis, and tumor progression.[2] Although bFGF has been found in a variety of organs, aFGF has been found only in brain, hypothalmus and retina. Fibroblast Growth Factor-Acidic has numerous synonyms, including: heparin-binding growth factor (class I or alpha), retina-derived growth factor and astroglial growth factor I.[5]

Reagent

Supplied lyophilized from 0.2 µm filtered solution in PBS with 5% trehalose; 1 mg/vial.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Reconstitution Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm-filtered PBS to produce a 1 mg/ml stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage

Prior to reconstitution store at –20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at –20 °C. Avoid repeated freezing and thawing.

Product Profile

Anti-Fibroblast Growth Factor-Acidic is tested for its ability to neutralize the biological activity of aFGF on NR6R-3T3 cells.

The ND_{50} of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of aFGF which is present at a concentration just high enough to elicit a maximum response.

Bioactivity: ND_{50} = 0.5-5.0 µg/ml

Indirect ELISA: 0.5-1 µg/ml antibody detects 0.6 ng/well of human or bovine aFGF.

Indirect Immunoblotting:1- 2 µg/ml antibody detects 20-25 ng aFGF/lane under non-reducing conditions and 5 ng aFGF/lane under reducing conditions.

Endotoxin:< 0.1 EU/µg of antibody

References

1. Gospodarowicz, D., and Moran, J., *J. Proc. Natl. Acad. Sci. USA*, **71**, 4648 (1974).
2. Gospodarowicz, D., et al., *Endocrine Rev.*, **8**, 95 (1987).
3. Gospodarowicz, D. and Cheng, J., *J. Cell Physiol.*, **128**, 475 (1986).

4. Neufeld, G. and Gospodarowicz, D., J. Biol. Chem., **261**, 5631 (1986).

5. Lobb, R., et al., Anal. Biochem., **154**, 1 (1986).

TD,TH,PHC 10/10-1