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Acidic Fibroblast Growth Factor (aFGF)

100 µl

For Research Use Only. Not for Use in Diagnostic Procedures.

MW (kDa):
17

UniProt ID:
#P05230

Entrez-Gene Id:
2246

Background

Fibroblast growth factors are a family of broad-spectrum growth factors influencing a plethora of cellular activities. The interaction of at least 23 ligands, four receptors, and multiple coreceptors provides a dramatic complexity to a signaling system capable of effecting a multitude of responses (1,2). Basic fibroblast growth factor (bFGF or FGF2), initially identified as a mitogen with prominent angiogenic properties, is now recognized as a multifunctional growth factor (3). It is clear that bFGF produces its biological effects in target cells by signaling through cell-surface FGF receptors. bFGF binds to all four FGF receptors. Ligand binding induces receptor dimerization and autophosphorylation, allowing binding and activation of cytoplasmic downstream target proteins, including FRS-2, PLC, and Crk (4,5). The FGF signaling pathway appears to play a significant role not only in normal cell growth regulation but also in tumor development and progression (6). Acidic FGF (aFGF or FGF1) is another extensively investigated protein of the FGF family. aFGF shares 55% DNA sequence homology with bFGF. These two growth factors are ubiquitously expressed and exhibit a wide spectrum of similar biological activities with quantitative differences likely due to variations in receptor affinity or binding (7).

Purity

>95%

Source / Purification

Human recombinant protein expressed in *E. coli*

Bioactivity

ED₅₀ for aFGF-stimulated NIH/3T3 cell proliferation assay is 0.1-0.4 ng/ml. CST recommends using 50-100 ng/ml for stimulation of bFGF signaling.

Background References

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2. Bansal, R. (2002) *Dev. Neurosci.* 24, 35-46.
3. Morrison, R.S. et al. (1994) *J. Neurooncol.* 18, 207-216.
4. Kouhara, H. et al. (1997) *Cell* 89, 693-702.
5. Mohammadi, M. et al. (1991) *Mol. Cell. Biol.* 11, 5068-5078.
6. Bikfalvi, A. (1995) *Eur. J. Cancer* 31A, 1101-1104.
7. Ledoux, D. et al. (1992) *Prog. Growth Factor Res.* 4, 107-120.

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