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Product Data Sheet

Recombinant Human FGF-basic/145aa (carrier-free)

Catalog # / Size: 571502 / 10 µg
571504 / 25 µg
571506 / 100 µg
571508 / 500 µg

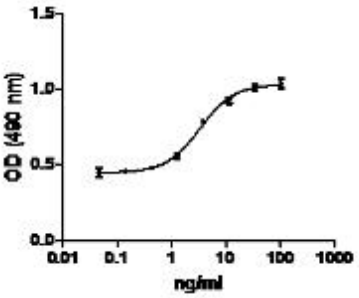
Source: Human FGF-basic, amino acids Ala144-Ser288 (Accession # NM_002006) was expressed in *E. coli.*

Molecular Mass: The 145 amino acid recombinant protein has a predicted molecular mass of 16,310 Da. The DTT-reduced and non-reduced protein migrate at approximately 18kDa by SDS-PAGE. This protein may or may not contain an N-terminal methionine.

Purity: Purity is >98%, as determined by Coomassie stained SDS-PAGE.

Endotoxin Level: Endotoxin level is <0.1 EU/µg (<0.01ng/µg) protein as determined by the LAL method.

Activity: ED50 = 1 - 4 ng/ml, corresponding to a specific activity of 1 - 0.25 x 10^6 units/mg, as determined by the dose dependent stimulation of NIH/ 3T3 cell proliferation. The bioactivity is equivalent to competitor reported values.



3NIH/3T3 cell proliferation induced by human FGFb.

Preparation: 10-100µg sizes are bottled at 200µg/mL. 500µg sizes and larger are bottled at the concentration indicated on the vial.

Formulation: 0.22 µm filtered protein solution is in 10mM NaH_2PO_4, 150mM NaCl, pH 7.2, 1mM DTT.

Storage: Unopened vial can be stored at -20°C for six months or at -70°C for one year. For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10µg/mL in buffer containing carrier protein such as 1% BSA or HSA or 10% FBS. For long term storage, aliquot into polypropylene vials and store in a manual defrost freezer. **Avoid repeated freeze/thaw cycles.**

Applications:

Applications: Bioassay

Description: FGFb is a member of the fibroblast growth factor (FGF) family which includes 23 members. FGFb is expressed in almost all tissues and play important roles in a variety of normal and pathological processes, including development, wound healing and neoplastic transformation. FGFb is mitogenic for many cell types, both epithelial and mesenchymal. FGFb shows potent angiogenic activity and has been implicated in tumor angiogenesis (2). In prostate, bladder, and renal cancers, FGFb regulates the induction of metalloproteinases (MMP) that degrade extracellular matrix proteins, thus facilitating tumor metastasis (3). FGFb binds to a family of four distinct, high affinity tyrosine kinase receptors, designated FGFR-1 to -4 (4). In addition, FGFb binds to the ECM, and heparan sulfate (HS) is an essential and dynamic regulator of fibroblast growth factor (FGF) signaling. Two fundamentally different crystallographic models have been proposed to explain, at the molecular level, how HS/heparin enables FGF and FGF receptor (FGFR) to assemble into a functional dimer on the cell surface (5), although there is controversy regarding the exact manner by which this occurs.

Antigen References:
1. Rusnati M and Presta M *Current Pharm Des* 13:2025-2044 2007.
2. Chaffer CL, *et al. Differentiation* 75(9):831-42 2007.
3. Cronauer NV, *et al. Eur Urol* 43:309-319 2003.
4. Shimizu A, *et al. J. Biol. Chem.* 276:11031-11040 2001.
5. Mahammadi M, *et al. Curr Opin Struct Biol* 15:506-516 2005.

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