

Recombinant Human Fibroblast Growth Factor 12

Information

Gene ID		
Accession #		
Alternate Names		
Source	Escherichia coli.	
M.Wt	Approximately 20.5 kDa, a single non-glycosylated polypeptide chain containing 181 amino acids.	
AA Sequence	MESKEPQLKG IVTRLFSQQG YFLQMHPDGT IDGTKDENSD YTLFNLIPVG LRVVAIQGVK ASLYVAMNGE GYLYSSDVFT PECKFKESVF ENYYVIYSST LYRQQESGRA WFLGLNKEGQ IMKGNRVKKT KPSSHFVPKP IEVCMYREQS LHEIGEKQGR SRKSSGTPTM NGGKVVNQDS T	
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.	
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.	
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH7.4, with 1 mM DTT.	
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at \leq -20°C. Further dilutions should be made in appropriate buffered solutions.	
Biological Activity	The biological activity was determined by its binding ability in a functional ELISA. Immobilized rHuFGF R4/Fc Chimera at 5 μ g/mL (100 μ L/well) can bind rHuFGF-12 with a linear range of 1.6-100 ng/mL.	
Shipping Condition	Gel pack.	
Handling	Centrifuge the vial prior to opening.	
Usage	For Research Use Only! Not to be used in humans.	
Components and Storage		

Components and Storage

Components	10µg	100µg	500µg
Recombinant Human Fibroblast Growth Factor 12	10µg	100µg	500µg

Quality Control

Purity Endotoxin > 98 % by SDS-PAGE and HPLC analyses.

Less than 0.1 EU/ μ g of rHuFGF-12 as determined by LAL method.

Description

Fibroblast growth factor-12 is a member of the FGF superfamily of molecules contains at least 22 members. Human FGF-12 is synthesized as a 243 aa protein. It lacks a typical signal sequence and is considered to be a cytoplasmic protein. It does, however, possess an N-terminal bipartite nuclear localization signal (NLS) at aa 11 -18 and 28 - 38. The 243 aa protein has at least one alternate splice form that is 181 aa in length. This is termed FGF-12B. Alternate splicing deletes the N-terminal 66 aa in FGF-12 and replaces them with four aa in FGF-12B. This substitution removes the NLS from the short form. Studies on the short form (12B) show that it cannot bind any of the common FGF receptors. This is consistent with its cytoplasmic localization. It can, however, bind to IB2 (islet brain-2), a cellular kinase scaffold protein, and voltage-gated sodium channels, suggesting FGF-12B plays an important role in intracellular signaling and ion exchange. Mouse and human FGF-12B differ by only one amino acid.

Reference

