

Recombinant Human FGF12 protein

Cat. No. FGF12-543H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human FGF12 protein was expressed in Escherichia coli.
Species	Human
Source	E.coli
ProteinLength	181
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.
Form	Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH7.4, with 1 mM DTT.

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Bio-activity	The biological activity was determined by its binding ability in a functional ELISA. Immobilized rHuFGF R4/Fc Chimera at 5 µg/mL (100 µL/well) can bind rHuFGF-12 with a linear range of 1.6-100 ng/mL.
Molecular Mass	Approximately 20.5 kDa, a single non-glycosylated polypeptide chain containing 181 amino acids.
AA Sequence	MESKEPQLKGIVTRLFSQQGYFLQMHPDGTIDGTKDENS DYTLFNLIPVGLRVVAIQ GVKASLYVAMNGEGYLYSSDVFTPECKFKESVFENYYVIYSSTLYRQQESGRAWFL GLNKEGQIMKGNRVKKT KPSSHFPKPIEVCMYREQLHEIGEKQGRSRKSSGTPT MNGGKVVNQDST
Endotoxin	Less than 0.1 EU/g of rHuFGF-12 as determined by LAL method.
Purity	>98% by SDS-PAGE and HPLC analysis.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
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 ≤-20centigrade. Further dilutions should be made in appropriate buffered solutions.

GENE INFORMATION

Gene Name FGF12

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Official Symbol	FGF12
Synonyms	FGF12; fibroblast growth factor 12; FGF12B; FHF1; fibroblast growth factor 12B; fibroblast growth factor FGF 12b; fibroblast growth factor homologous factor 1; myocyte activating factor; FHF-1; FGF-12; myocyte-activating factor; fibroblast growth factor FGF-12b;
Gene ID	2257
mRNA Refseq	NM_004113
Protein Refseq	NP_004104
MIM	601513
UniProt ID	P61328

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