Animal-Free FGF-4 Protein, Human (His)

Cat. No.:	HY-P700066AF
Synonyms:	Fibroblast growth factor 4; FGF-4; Heparin secretory-transforming protein 1; HST; HST-1; HSTF-1; Heparin-binding growth factor 4; HBGF-4; Transforming protein KS3; FGF4; HST; HSTF1; KS3
Species:	Human
Source:	E. coli
Accession:	P08620 (G25-L206)
Gene ID:	2249
Molecular Weight:	Approximately 20.70 kDa

PROPERTIES

AA Sequence	M G R G G A A A P T A P N G T L E A E L E R R W E S L V A L S L A R L P V A A Q P K E A A V Q S G A G D Y L L G I K R L R R L Y C N V G I G F H L Q A L P D G R I G G A H A D T R D S L L E L S P V E R G V V S I F G V A S R F F V A M S S K G K L Y G S P F F T D E C T F K E I L L P N N Y N A Y E S Y K Y P G M F I A L S K N G K T K K G N R V S P T M K V T H F L P R L
Biological Activity	Measure by its ability to induce 3T3 cells proliferation. The ED_{50} for this effect is <2.5 ng/mL. The specific activity of recombinant human FGF-4 is >4 x 10^5 IU/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a solution containing 0.1% sarkosyl in 1X PBS, pH 8.0.
Endotoxin Level	<0.1 EU per 1 μg of the protein by the LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	FGF-4 Protein assumes a pivotal role in orchestrating embryonic development, cell proliferation, and cell differentiation. Its indispensability is evident in the normal development of limbs and cardiac valves during embryogenesis. Additionally, FGF-4 may contribute to embryonic molar tooth bud development by inducing the expression of key genes, including MSX1, MSX2, and SDC1, in dental mesenchyme cells, thus highlighting its diverse regulatory functions. FGF-4 engages in intricate interactions with FGFR1, FGFR2, FGFR3, and FGFR4, forming molecular alliances critical for signaling cascades. The binding

affinity between FGF-4 and its receptors is potentiated by heparan sulfate glycosaminoglycans, serving as indispensable coreceptors in this complex regulatory network. These interactions underscore the multifaceted and essential role of FGF-4 in driving fundamental processes during development.

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