

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human FGFR3 protein			
	Human FGFR3 (IIIc) (Glu23-Gly375) Accession # P22607.1	IEGRMD	Human IgG1 (Pro100-Lys330)	Avi-tag
	N-terminus		C-terminus	
N-terminal Sequence Analysis	Glu23			
Structure / Form	Disulfide-linked homodimer Biotinylated via Avi-tag			
Predicted Molecular Mass	67 kDa			

SPECIFICATIONS

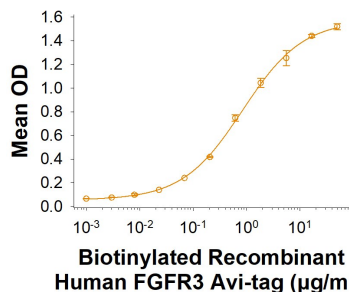
SDS-PAGE	94-104 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human FGFR3 Fc Chimera Avi-tag (Catalog # AVI766) binds to Recombinant Human FGF acidic/FGF1 (aa16-155) Protein (Catalog # 232-FA) with a ED ₅₀ of 0.250-2.50 µg/mL
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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.

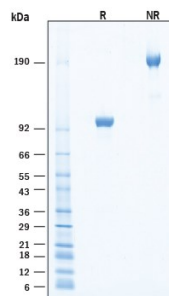
DATA

Binding Activity



Biotinylated Recombinant Human FGFR3 Fc Chimera Avi-tag Protein Binding Activity. Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human FGFR3 Fc Chimera Avi-tag Protein (Catalog # AVI766) binds to Recombinant Human FGF acidic/FGF1 (aa 16-155) Protein (Catalog # 232-FA) with a ED₅₀ of 0.250-2.50 µg/mL

SDS-PAGE



Biotinylated Recombinant Human FGFR3 Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human FGFR3 Fc Chimera Avi-tag Protein (Catalog # AVI766) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 94-104 kDa and 190-210 kDa, respectively.

BACKGROUND

Fibroblast growth factors (FGFs) comprise a family of at least eighteen structurally related proteins that are involved in a multitude of physiological and pathological cellular processes, including cell growth, differentiation, angiogenesis, wound healing and tumorigenesis. The biological activities of the FGFs are mediated by a family of type I transmembrane tyrosine kinases which undergo dimerization and autophosphorylation after ligand binding. Four distinct genes encoding closely related FGF receptors, FGF R1-4, are known. All four genes for FGF Rs encode proteins with an N-terminal signal peptide, three immunoglobulin (Ig)-like domains, an acid-box region containing a run of acidic residues between the IgI and IgII domains, a transmembrane domain and the split tyrosine-kinase domain. Multiple forms of FGF R1-3 are generated by alternative splicing of the mRNAs. A frequent splicing event involving FGF R1 and 2 results in receptors containing all three Ig domains, referred to as the α isoform, or only IgII and IgIII, referred to as the β isoform. Only the α isoform has been identified for FGF R3 and FGF R4. Additional splicing events for FGF R1-3, involving the C-terminal half of the IgIII domain encoded by two mutually exclusive alternative exons, generate FGF receptors with alternative IgIII domains (IIIb and IIIc). A IIIa isoform which is a secreted FGF binding protein containing only the N-terminal half of the IgIII domain plus some intron sequences has also been reported for FGF R1. Mutations in FGF R1-3 have been found in patients with birth defects involving craniosynostosis. The complex patterns of expression of these receptors as well as the specificity of their interactions with the various FGF ligand family members are under investigation. Our Avi-tag Biotinylated human FGFR3 Fc Chimera features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

References:

1. Galzie, Z. *et al.* (1997) *Biochem. Cell Biol.* **75**:669.
2. Burke, D. *et al.* (1998) *Trends Biochem. Sci.* **23**:59.