Recombinant Human Soluble FGFR-4/Fc Chimera

20210614BB

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no:	**SFC-021**
Size:	10 µg
Lot. No.:	According to product label
Country of origin:	Germany

Scientific Background

Gene:	*FGFR4*
Synonyms:	Fibroblast growth factor receptor 4, CD334

Recombinant human sFGFR-4 was fused with the Fc-part of human IgG_1. Human recombinant sFGFR-4/Fc is a disulfide-linked heterodimeric protein. In the reduced form the glycosylated subunits of sFGFR-4/Fc display a molecular mass of 80-85kDa.
Fibroblast growth factors (FGFs) comprise a family of at least 23 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, FGFR-1 - 4, are known. All four genes for FGFRs 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 FGFR-1 to -3 are generated by alternative splicing of the mRNAs. A frequent splicing event involving FGFR-1 and -2 results in receptors containing all three Ig domains, referred to as the alpha isoform, or only IgII and IgIII, referred to as the beta isoform. Only the alpha isoform has been identified for FGFR-3 and FGFR-4. Additional splicing events for FGFR-1 to -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 FGFR-1. Mutations in FGFR-1 - 3 have been found in patients with birth defects involving craniosynostosis.

References

1. Ezzat et al., Biochem Biophys Res Commun. 287:60, 2001
2. Takaishi et al., Biochem Biophys Res Commun. 267:658, 2000

Sequence

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LEASEEVELEPCLAPSLEQQEQELTVALGQPVRLCCGRAERGGHWYKEGSRL
APAGRVRGWRGRLEIASFLPEDAGRYLCLARGSMIVLQNLTLITGDSLTSSN
DDEDPKSHRDPSNRHSYPQQAPYWTHPQRMEKKLHAVPAGNTVKFRCPAAGN
PTPTIRWLKDGQAFHGENRIGGIRLRHQHWSLVMESVVPSDRGTYTCLVENA
VGSIRYNYLLDVLERSPHRPILQAGLPANTTAVVGSDVELLCKVYSDAQPHI
QWLKHIVINGSSFGADGFPYVQVLKTADINSSEVEVLYLRNVSAEDAGEYTC
LAGNSIGLSYQSAWLTVLPEEDPTWTAAAPEARYTDTRSDKTHTCPPCPAPE
LLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVH
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NYKTTPPMLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSL
SLSPGK
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Database References

Protein RefSeq:	NP_002002
Uniprot ID:	P22455
mRNA RefSeq:	NM_002011

Product Specifications

Expressed in	Insect cells
Purity	> 90% by SDS-PAGE & silver stain
Buffer	PBS
Stabilizer	None
Formulation	lyophilized
Length (aa):	578
MW:	64.4 kDa

Stability: Lyophilized samples are stable for greater than six months at –20°C to –70°C. Reconstituted sFGFR-4/Fc should be stored in working aliquots at -20°C.

Reconstitution: The lyophilized sFGFR-4/Fc is soluble in water and most aqueous buffers and should be reconstituted in PBS or medium to a concentration not lower than 50µg/ml.

AVOID REPEATED FREEZE AND THAW CYCLES!

Biological Activity: Measured by its ability to bind recombinant human FGF-2 in a functional solid phase binding assay.

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Recombinant Human Soluble FGFR-4/Fc Chimera

Handling/Application

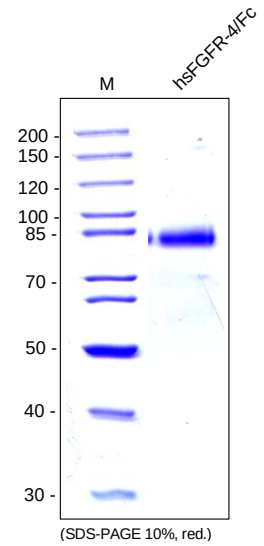

Fig. 1: SDS-PAGE analysis of recombinant human soluble FGFR-4/Fc produced in insect cells. Sample was loaded in 10% SDS-polyacrylamide gel under reducing condition and stained with Coomassie blue.

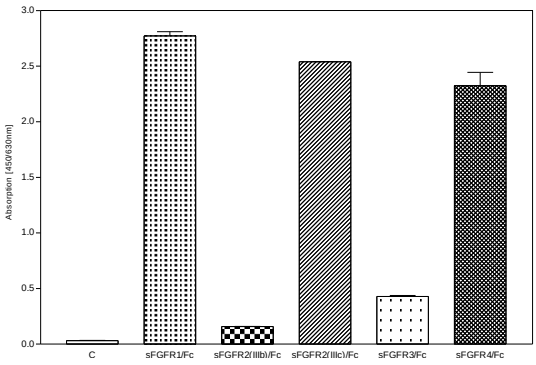

Fig. 2: Binding of recombinant human FGF2 to different recombinant human soluble FGF receptors. FGF2 was coated at 2µg/ml. The soluble receptors were added with 1µg/ml. Detection was performed with a conjucated anti-Fc antibody.

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