

Recombinant Human Fibroblast Growth Factor Receptor 4, Fc-tagged

Cat. No. FGFR4-04H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Soluble FGFR-4a (IIIc) Fc Chimera fused with Xa cleavage site with the Fc part of human IgG1 produced in baculovirus is a heterodimeric, glycosylated, Polypeptide chain and having a molecular mass of 170 kDa. The FGFR4 is purified by proprietary chromatographic techniques.
Species	Human
Source	Insect Cells
Description	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 a isoform, or only IgII and IgIII, referred to as the b isoform. Only the a isoform has been identified for FGF R3 and FGF R4. Additional splicing events for

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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.

Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	CD334 was lyophilized from a concentrated (1 mg/ml) sterile solution containing no additives.
Solubility	It is recommended to reconstitute the lyophilized FGFR-4 in sterile PBS not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	Determined by its ability to inhibit human FGF acidic-dependent proliferation on R1 cells. The ED50 for this effect is typically at 15.0-30.0 ng/ml.
Storage	Lyophilized FGFR4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution FGFR4 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

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Gene Name	FGFR4 fibroblast growth factor receptor 4 [Homo sapiens]
Synonyms	FGFR4; fibroblast growth factor receptor 4; TKF; JTK2; CD334; MGC20292; OTTHUMP00000161430; tyrosylprotein kinase; protein-tyrosine kinase; hydroxyaryl-protein kinase; tyrosine kinase related to fibroblast growth factor receptor; EC 2.7.10.1; FGFR-4;CD334 antigen
Gene ID	2264
mRNA Refseq	NM_002011
Protein Refseq	NP_002002
MIM	134935
UniProt ID	P22455
Chromosome Location	5q35.1-qter
Pathway	Endocytosis; MAPK signaling pathway; Regulation of actin cytoskeleton; Signaling by FGFR
Function	ATP binding; fibroblast growth factor binding; fibroblast growth factor receptor activity; nucleotide binding; protein binding; receptor activity; transferase activity