Recombinant Human FGF R1β (IIIc) Fc Chimera

Catalog Number: 661-FR

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Human FGF R1β (IIIc) (Arg22-Glu285) Accession # NP_075594	IEGRDMD	Human IgG_1 (Pro100-Lys330)
N-terminus		C-terminus

N-terminal Sequence Analysis Arg22

Structure / Form Disulfide-linked homodimer

Predicted Molecular Mass 56 kDa (monomer)

SPECIFICATIONS

SDS-PAGE 90-95 kDa, reducing conditions

Activity Measured by its ability to inhibit FGF acidic-dependent proliferation of NR6R-3T3 mouse fibroblast cells. The ED_{50} for this effect is typically 1-3 ng/mL.

Endotoxin Level <0.01 EU per 1 µg of the protein by the LAL method.

Purity >90%, by SDS-PAGE under reducing conditions and visualized by silver stain.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in sterile PBS.

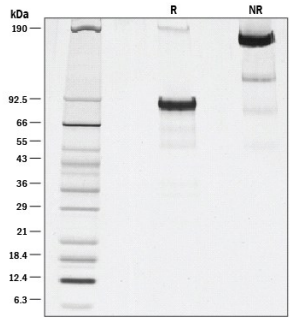
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**

- 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.

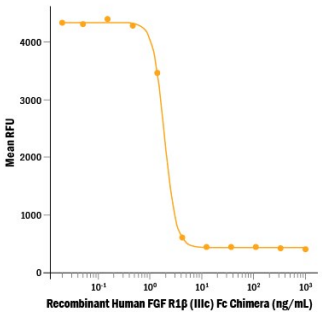
DATA

SDS-PAGE



1 µg/lane of Recombinant Human FGF R1β (IIIc) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by silver staining, showing bands at 90 kDa and 180 kDa, respectively.

Bioactivity



Recombinant Human FGF R1β (IIIc) (Catalog # 661-FR) inhibits FGF acidic-dependent cell proliferation of the NR6R-3T3 mouse fibroblast cell line. The ED_{50} for this effect is typically 1-3 ng/mL.

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 tumorgenesis. 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.

References:

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

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