Recombinant Mouse FGF R3 (IIIb) Fc Chimera

Catalog Number: 9089-FR

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Mouse FGF R3 (IIIb) (Ala33-Tyr369) Accession # NP_001156689	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Ala33
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	63 kDa

SPECIFICATIONS

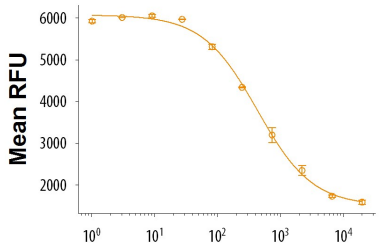
SDS-PAGE	83-101 kDa, reducing conditions
Activity	Measured by its ability to inhibit FGF acidic-dependent proliferation of BaF3 mouse pro-B cells transfected with human FGF R3 (IIIc). The ED_{50} for this effect is typically 0.2-1.2 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
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. 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.** ● 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

Bioactivity



Recombinant Mouse FGF R3 (IIIb) Fc Chimera (Catalog # 9089-FR) inhibits Recombinant Mouse FGF acidic (Catalog # 4686-FA)-dependent proliferation of Human FGF R3 (IIIc) transfected BaF3 mouse pro-B cells. The ED_{50} for this effect is typically 0.2-1.2 µg/mL.

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BACKGROUND

Fibroblast growth factor receptor 3 (FGF R3), also known as CEK2 and CD333, is an approximately 120 kDa transmembrane receptor tyrosine kinase that plays a role in skeletal development and tumorigenesis (1). Mature mouse FGF R3 (IIIc) consists of a 349 amino acid (aa) extracellular domain (ECD) with three Ig-like domains, a 21 aa transmembrane segment, and a 411 aa cytoplasmic domain that contains the tyrosine kinase domain (2). Alternative splicing generates an additional isoform (IIIb) with a substitution in the third Ig-like domain (3). Within the ECD, mouse FGF R3 (IIIb) shares 91% and 98% aa sequence identity with comparable isoforms of human and rat FGF R3, respectively. The FGF R3 (IIIb) triggers cell proliferation in response to FGF acidic and FGF-9, while FGF R3 (IIIc) shows a wider selectivity that includes FGF acidic, FGF basic, FGF-4, -8, -9, -17, -18, -19, and -20 (4, 5). Ligand binding induces receptor dimerization and acitvation of the tyrosine kinase domain (1). FGF mediated activation of FGF R3 is dependent on the presence of heparan sulfate proteoglycans (6). FGF R3 functions as a negative regulator of endochondral bone growth, and FGF R3 mutations are associated with chondrodysplasia in humans (7, 8). In addition, the development of many cancers is associated with mutations or dysregulation of FGF R3 which can result in constitutive receptor activation (1).

References:

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