Data Sheet (Cat.No.TMPY-02635)

TargetMol

FGFR4 Protein, Rat, Recombinant (hFc)

General Information

Synonyms:	fibroblast growth factor receptor 4
Protein Construction:	A DNA sequence encoding the rat FGFR4 (Q498D6) extracellular domain (Met 1-Asp 367) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Phe 17
Species:	Rat
Expression Host:	HEK293 Cells
Accession:	Q498D6
Molecular Weight:	66 kDa (predicted); 110 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1. Measured by its binding ability in a functional ELISA. 2. Immobilized human FGF18 at 10 μg/mL (100 μl/well) can bind Rat FGFR4 , The EC50 of Rat FGFR4 is 1.17 μg/mL. 3. Immobilized mouse FGF18 at 10 μg/mL (100 μl/well) can bind Rat FGFR4 , The EC50 of Rat FGFR4 is 0.44 μg/mL. 4. Immobilized human bFGF at 10 μg/mL (100 μl/well) can bind Rat FGFR4 , The EC50 of Rat FGFR4 is 0.163 μg/mL.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Fibroblast growth factor receptor 4 (FGFR4) also known as CD334 antigen or tyrosine kinase related to fibroblast growth factor receptor, is a member of the fibroblast growth factor receptor family, where amino acid sequence is highly conserved between members and throughout evolution. FGFR family members differ from one another in their ligand affinities and tissue distribution. A full-length representative protein would consist of an extracellular region, composed of three immunoglobulin-like domains, a single hydrophobic membrane-spanning segment and a cytoplasmic tyrosine kinase domain. The extracellular portion of FGFR4/CD334 interacts with fibroblast growth factors, setting in motion a cascade of downstream signals, ultimately influencing mitogenesis and differentiation. FGFR4/CD334 preferentially binds acidic fibroblast growth factor and, although its specific function is unknown, it is overexpressed in gynecological tumor samples, suggesting a role in breast and ovarian tumorigenesis. FGFR4/CD334 signaling is down-regulated by receptor internalization and degradation; MMP14 promotes internalization and degradation of FGFR4/CD334. Mutations in FGFR4/CD334 lead to constitutive kinase activation or impair normal FGFR4 inactivation lead to aberrant signaling.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Hart KC, et al. (2000) Transformation and Stat activation by derivatives of FGFR1, FGFR3, and FGFR4. Oncogene. 19 (29): 3309-20.

Xie MH, et al. (1999) FGF-19, a novel fibroblast growth factor with unique specificity for FGFR4. Cytokine. 11(10): 729-35.

Yu C, et al. (2000) Elevated cholesterol metabolism and bile acid synthesis in mice lacking membrane tyrosine kinase receptor FGFR4. J Biol Chem. 275(20): 15482-9.

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