

## FGFR4 Protein, Human, Recombinant (His)

### General Information

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|-----------------------|--|
| Synonyms:             | TKF;JTK2;CD334;fibroblast growth factor receptor 4   |
| Protein Construction: | A DNA sequence encoding the extracellular domain (Met 1-Asp 369) of human FGFR4 (NP_002002.3) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Leu 22 |
| Species:              | Human  |
| Expression Host:      | HEK293 Cells   |
| Accession:            | P22455-1   |
| Molecular Weight:     | 40 kDa (predicted); 60 kDa (reducing condition, due to glycosylation)  |

### QC Testing

|                      |  |
|----------------------|--|
| Biological Activity: | Measured by its ability to inhibit FGF acidic (aFGF / FGF1) dependent proliferation of Balb/c3T3 mouse embryonic fibroblasts. The ED50 for this effect is typically 0.2-1µg/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:      | Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.   |
| 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.<br><small>Actual storage temperature shall be subject to the COA.</small> |

### 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 Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

### Reference

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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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Tel: 781-999-4286 E\_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481