Data Sheet (Cat.No.TMPY-01208)

TargetMol

FGFR3 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	fibroblast growth factor receptor 3;Mfr3;HBGFR;CD333;FR3;sam3;Flg-2;Fgfr-3
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Tyr 367) of mouse FGFR3 (NP_032036.2) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Glu 21
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q7TSI8
Molecular Weight:	37 kDa (predicted); 70-80 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its ability to inhibit FGF acidic dependent proliferation of Balb/c3T3 mouse embryonic fibroblasts. The ED50 for this effect is typically 0.3-4 μg/mL.
Purity:	> 98 % 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

FGFR3, also known as CD333, is a member of the fibroblast growth factor receptor (FGFR) family, with its amino acid sequence being highly conserved between members and among divergent species. FGFR family members differ from one another in their ligand affinities and tissue distribution. FGFRs are transmembrane catalytic receptors that have intracellular tyrosine kinase activity. Mutations in FGFR genes are the cause of several human

developmental disorders characterized by skeletal abnormalities such as achondroplasia, and upregulation of FGFR expression may lead to cell transformation and cancer. FGFR3, 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 FGFR3 interacts with fibroblast growth factors, setting in motion a cascade of downstream signals, ultimately influencing mitogenesis and differentiation. FGFR3 binds acidic and basic fibroblast growth hormone and plays a role in bone development and maintenance. Mutations in FGFR3 gene lead to craniosynostosis and multiple types of skeletal dysplasia. Three alternatively spliced transcript variants that encode different protein isoforms have been described. CD333 is the receptor for acidic and basic fibroblast growth factors.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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Lamy A,et al.(2006) Molecular profiling of bladder tumors based on the detection of FGFR3 and TP53 mutations. J Urol. 176(6 Pt 1):2686-9.

Schweitzer DN,et al.(2001) Subtle radiographic findings of achondroplasia in patients with Crouzon syndrome with acanthosis nigricans due to an Ala391Glu substitution in FGFR3. Am J Med Genet. 98 (1):75-91.

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