Data Sheet (Cat.No.TMPY-00804)

TargetMol

FGF-9 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	SYNS3;FGF-9;fibroblast growth factor 9;HBGF-9;GAF;HBFG-9
Protein Construction:	A DNA sequence encoding the mature form of human fibroblast growth factor 9 (NP_002001.1) (Leu 4-Ser 208) was expressed with the fused Fc region of human IgG1 at the N-terminus. Predicted N terminal: Glu 20
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P31371
Molecular Weight:	54 and 37 kDa (predicted); 54 and 37 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured in a cell proliferation assay using Balb/c 3T3 mouse embryonic fibroblasts. The ED50 for this effect is typically 10-60 ng/mL.
Purity:	> 85 %, 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 9 (FGF9) also known as Glia-activating factor or Heparin-binding growth factor 9, is a member of the fibroblast growth factor (FGF) family. FGF family members possess broad mitogenic and cell survival activities, and are involved in a variety of biological processes, including embryonic development, cell growth, morphogenesis, tissue repair, tumor growth and invasion. This protein was isolated as a secreted factor

that exhibits a growth-stimulating effect on cultured glial cells. In nervous system, this protein is produced mainly by neurons and may be important for glial cell development. Expression of the mouse homolog of this gene was found to be dependent on Sonic hedgehog (Shh) signaling. Mice lacking the homolog gene displayed a male-to-female sex reversal phenotype, which suggested a role in testicular embryogenesis. FGF9 plays an important role in the regulation of embryonic development, cell proliferation, cell differentiation and cell migration. FGF9 may have a role in glial cell growth and differentiation during development, gliosis during repair and regeneration of brain tissue after damage, differentiation and survival of neuronal cells, and growth stimulation of glial tumors.

Reference

Giri D, et al. (1999) FGF9 is an autocrine and paracrine prostatic growth factor expressed by prostatic stromal cells. J Cell Physiol. 180(1): 53-60.

Schmahl J, et al. (2004) Fgf9 induces proliferation and nuclear localization of FGFR2 in Sertoli precursors during male sex determination. Development. 131(15): 3627-36.

Garcès A, et al. (2000) FGF9: a motoneuron survival factor expressed by medial thoracic and sacral motoneurons. J Neurosci Res. 60(1): 1-9.

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