

## FGF-9 Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	heparin-binding growth factor-9;GAF;HBGF-9;Glia-activating factor;Fgf9;Fgf-9;Fibroblast growth factor 9
Protein Construction:	Met1-Ser208
Species:	Mouse
Expression Host:	E. coli
Accession:	P54130
Molecular Weight:	25 KDa (reducing condition)
AA Sequence:	Met1-Ser208

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.001 ng/μg (0.01 EU/μg) as determined by LAL test.
Formulation:	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, 5% Trehalose, 1 mM EDTA, 20% Glycerol, 1 mM DTT, pH 8.5.

### Preparation and Storage

#### Stability & Storage:

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:

Proteins are shipped with blue ice.

### Protein Background

Fibroblast growth factor-9 (FGF-9) is an approximately 26 kDa secreted glycoprotein of the FGF family. Secreted mouse FGF-9 lacks the N-terminal 1-3 aa and shares >98% sequence identity with rat, human, equine, porcine and bovine FGF-9. FGF-9 plays an important role in the regulation of embryonic development, cell proliferation, cell differentiation and cell migration. In the mouse embryo the location and timing of FGF-9 expression affects development of the skeleton, cerebellum, lungs, heart, vasculature, digestive tract, and testes. It 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. Deletion of mouse FGF-9 is lethal at birth due to lung hypoplasia, and causes rhizomelia, or shortening of the proximal skeleton. An unusual constitutive dimerization of FGF 9 buries receptor interaction sites which lowers its activity,

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and increases heparin affinity which inhibits diffusion. A spontaneous mouse mutant, Eks, interferes with dimerization, resulting monomeric, diffusible FGF-9 that causes elbow and knee synostoses (joint fusions) due to FGF-9 misexpression in developing joints.

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