

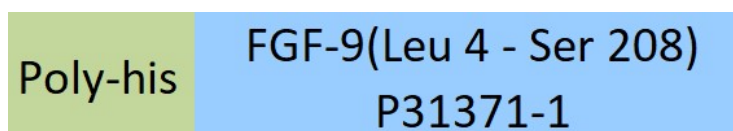
**Synonym**

FGF9,GAF,HBFG-9,MGC119914,MGC119915,SYNS3

**Source**

Human FGF-9, His Tag(FG9-H52H3) is expressed from human 293 cells (HEK293). It contains AA Leu 4 - Ser 208 (Accession # [P31371-1](#)).

Predicted N-terminus: His

**Molecular Characterization**

This protein carries a polyhistidine tag at the N-terminus

The protein has a calculated MW of 25 kDa. The protein migrates as 29-30 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per  $\mu\text{g}$  by the LAL method.

**Purity**

>90% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22  $\mu\text{m}$  filtered solution in PBS with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

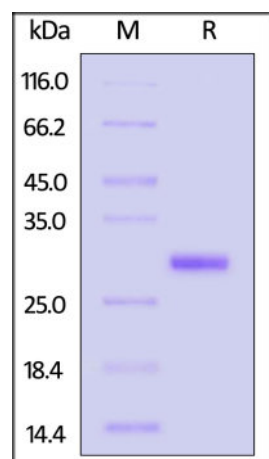
**Storage**

For long term storage, the product should be stored at lyophilized state at  $-20^{\circ}\text{C}$  or lower.

*Please avoid repeated freeze-thaw cycles.*

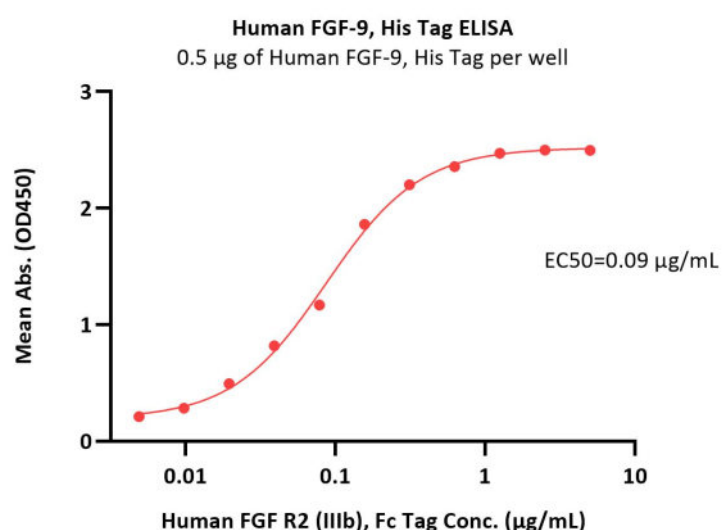
This product is stable after storage at:

- $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  for 12 months in lyophilized state;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

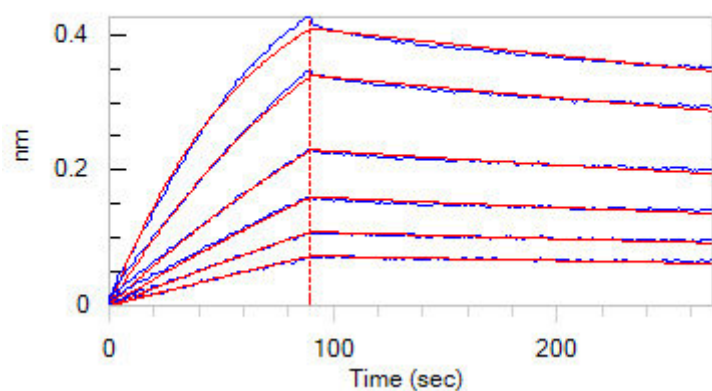
Human FGF-9, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

**Bioactivity-ELISA**

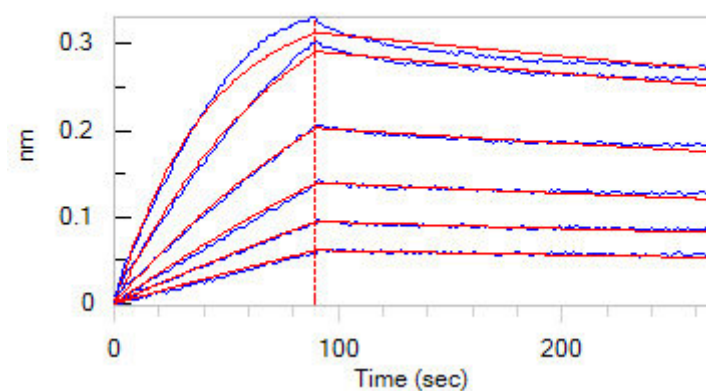


Immobilized Human FGF-9, His Tag (Cat. No. FG9-H52H3) at 5 µg/mL (100 µL/well) can bind Human FGF R2 (IIIb), Fc Tag (Cat. No. FGB-H5256) with a linear range of 0.005-0.625 µg/mL (QC tested).

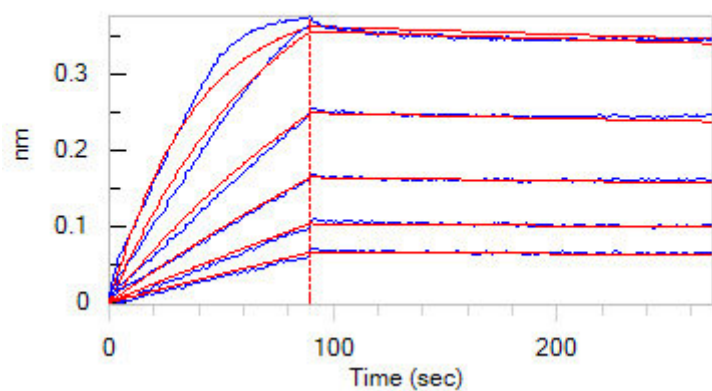
**Bioactivity-BLI**



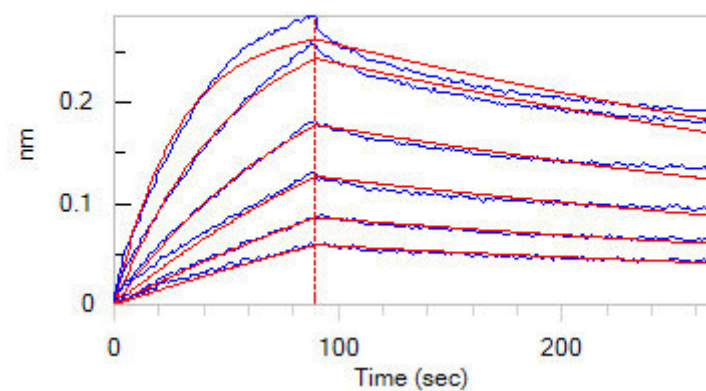
Loaded Human FGF R2 (IIIb), Fc Tag (Cat. No. FGB-H5256) on Protein A Biosensor, can bind Human FGF-9, His Tag (Cat. No. FG9-H52H3) with an affinity constant of 119 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human FGF R3 (IIIb), Fc Tag (Cat. No. FGB-H5259) on Protein A Biosensor, can bind Human FGF-9, His Tag (Cat. No. FG9-H52H3) with an affinity constant of 69.3 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human FGF R3 (IIIc), Fc Tag (Cat. No. FGC-H5256) on Protein A Biosensor, can bind Human FGF-9, His Tag (Cat. No. FG9-H52H3) with an affinity constant of 19.4 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human FGF R4, Fc Tag (Cat. No. FG4-H5253) on Protein A Biosensor, can bind Human FGF-9, His Tag (Cat. No. FG9-H52H3) with an affinity constant of 120 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

**Background**

Fibroblast growth factor 9 is also known as FGF9, GAF, HBFG-9, SYNS3, and 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. FGF9 is also a mitogen for oligodendrocyte type 2 astrocyte progenitor cells, smooth muscle cells, pheochromocytoma PC12 cells, and BALB/3T3 fibroblasts. However, unlike FGF acidic and basic, FGF9 has no effect on human umbilical vein endothelial cells, and it has been demonstrated that FGF9 binds preferentially to the IIIc form of FGFR3. Although no typical signal sequence was found in FGF9, it is secreted efficiently after synthesis not in a conventional manner. In nervous system, FGF9 is produced mainly by neurons and may play an important role in CNS development. FGF9 has been shown to interact with Fibroblast growth factor receptor 3.

### Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.