

**Biotinylated Human FGF basic Protein, Avitag™,His Tag (HPLC verified)**

Catalog # FGC-H81E3



**Synonym**

FGF2, BFGF, FGFB, FGF basic, HBGF-2

**Source**

Biotinylated Human FGF basic, Avitag,His Tag (FGC-H81E3) is expressed from *E. coli* cells. It contains AA Pro 143 - Ser 288 (Accession # [P09038-4](#)).

Predicted N-terminus: Met

**Molecular Characterization**



[Other Tags and Version Biotin & Other Labeled Version](#)

This protein carries an Avi tag (Avitag™) at the N-terminus, followed by a polyhistidine tag. The protein has a calculated MW of 20.1 kDa. The protein migrates as 20-22 kDa under reducing (R) condition (SDS-PAGE).

**Labeling**

**Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.**

**Protein Ratio**

Passed as determined by the HABA assay / binding ELISA.

**Purity**

>90% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 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°C or lower.

**Please avoid repeated freeze-thaw cycles.**

This product is stable after storage at:

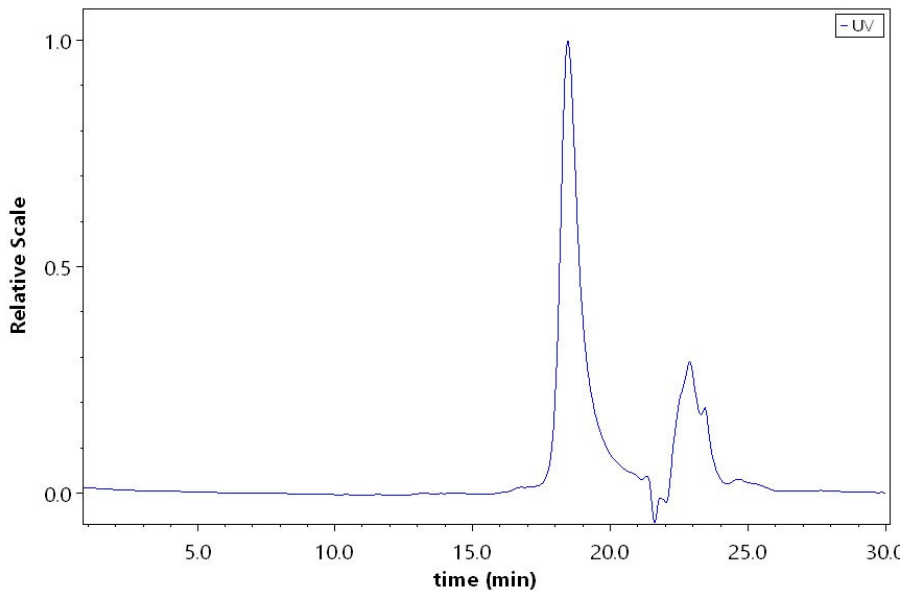
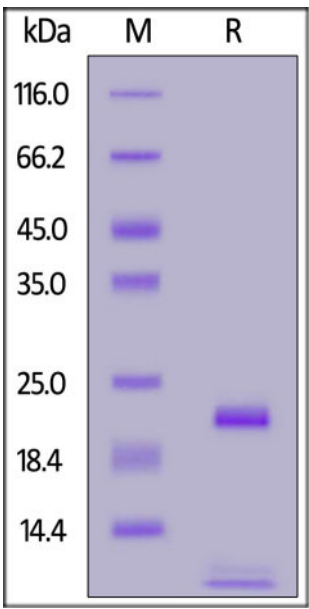
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**ACRO Quality Management System**

- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

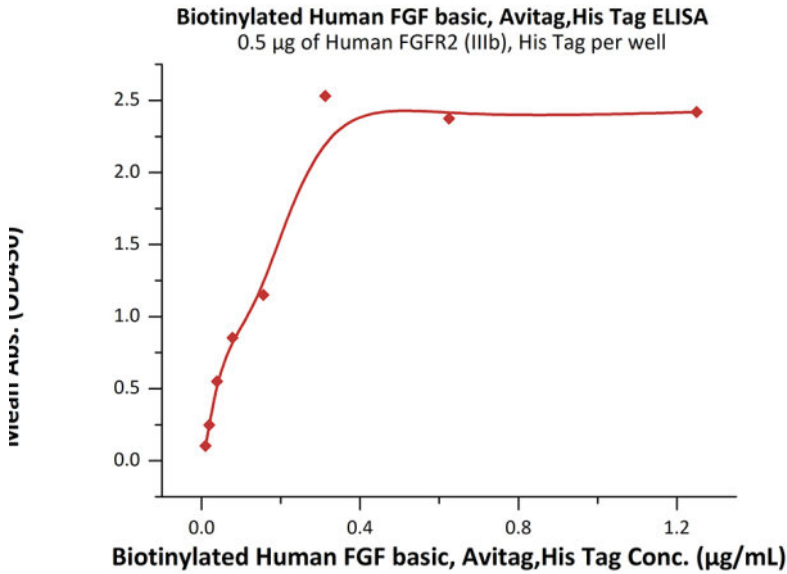
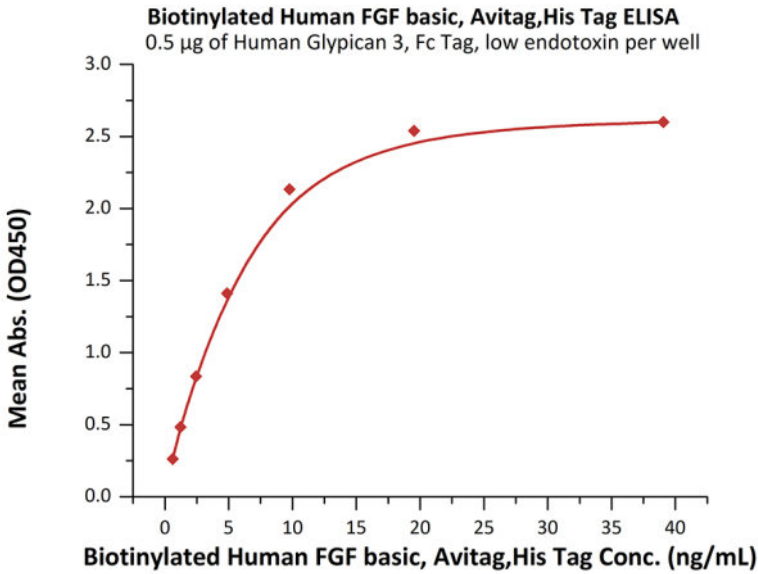
**SDS-PAGE**

**SEC-HPLC**



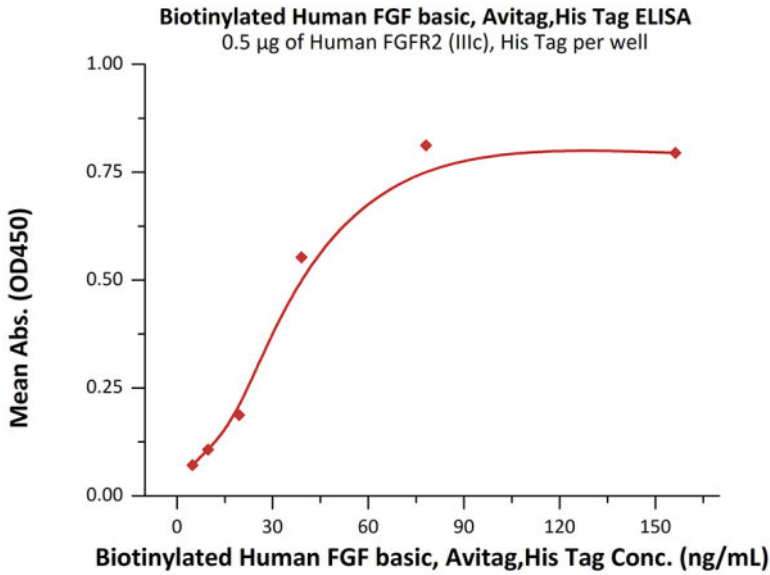
Biotinylated Human FGF basic, Avitag,His Tag on SDS-PAGE under reducing (R) The purity of Biotinylated Human FGF basic, Avitag,His Tag (Cat. No. FGC-H81E3) was greater than 85% as determined by SEC-HPLC. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## Bioactivity-ELISA



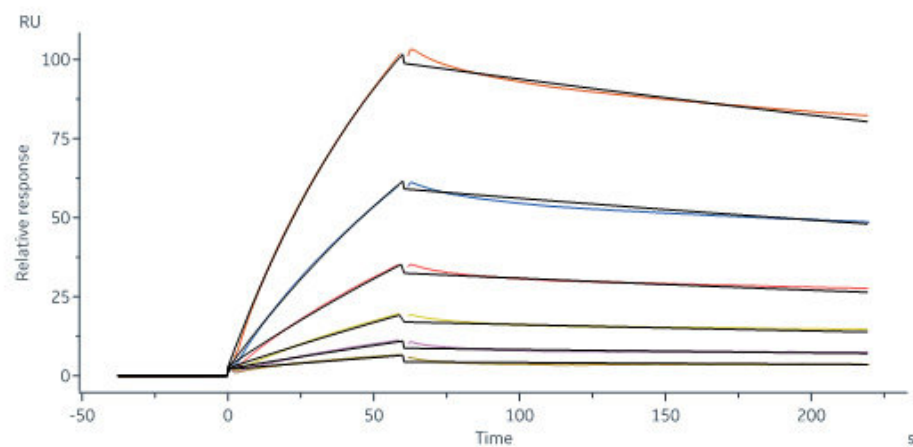
Immobilized Human Glypican 3, Fc Tag, low endotoxin (Cat. No. GP3-H5258) at 5 µg/mL (100 µL/well) can bind Biotinylated Human FGF basic, Avitag,His Tag (Cat. No. FGC-H81E3) with a linear range of 0.6-10 ng/mL (QC tested).

Immobilized Human FGFR2 (IIIb), His Tag (Cat. No. FGB-H5223) at 5 µg/mL (100 µL/well) can bind Biotinylated Human FGF basic, Avitag,His Tag (Cat. No. FGC-H81E3) with a linear range of 0.01-0.313 µg/mL (Routinely tested).



Immobilized Human FGFR2 (IIIc), His Tag (Cat. No. FGC-H5225) at 5 µg/mL (100 µL/well) can bind Biotinylated Human FGF basic, Avitag,His Tag (Cat. No. FGC-H81E3) with a linear range of 5-39 ng/mL (Routinely tested).

## Bioactivity-SPR



Biotinylated Human FGF basic, Avitag,His Tag (Cat. No. FGC-H81E3) immobilized on SA Chip can bind Human FGF R1, His Tag (Cat. No. FG1-H5223) with an affinity constant of 96.3 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

### Background

FGF basic is a member of the FGF family of at least 23 related mitogenic proteins which show 35-60% amino acid conservation. FGF acidic and basic, unlike the other members of the family, lack signal peptides and are apparently secreted by mechanisms other than the classical protein secretion pathway. FGF basic has been isolated from a number of sources, including neural tissue, pituitary, adrenal cortex, corpus luteum, and placenta. This factor contains four cysteine residues, but reduced FGF basic retains full biological activity, indicating that disulfide bonds are not required for this activity. bFGF is a critical component of human embryonic stem cell culture medium; the growth factor is necessary for the cells to remain in an undifferentiated state, although the mechanisms by which it does this are poorly defined. It has been demonstrated to induce gremlin expression which in turn is known to inhibit the induction of differentiation by bone morphogenetic proteins. It is necessary in mouse-feeder cell dependent culture systems, as well as in feeder and serum-free culture systems.

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