

Human Fibroblast Growth Factor 9 (hFGF9)

SC 10 µg
(With Carrier)

SF 10 µg
(Carrier Free)

LC 50 µg
(With Carrier)

LF 50 µg
(Carrier Free)

Multi-milligram quantities available

New 02/13



Cell Signaling
TECHNOLOGY®

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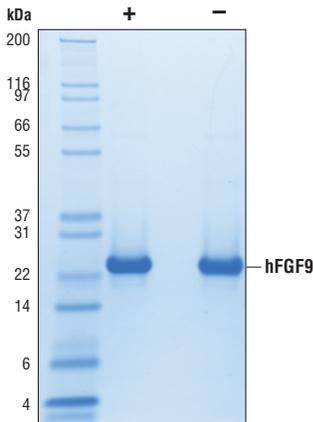
For Research Use Only. Not For Use In Diagnostic Procedures.

Source: Recombinant human FGF9 (hFGF9) Leu 4-Ser 208 (Accession #NP_31371) was expressed in *E. coli* at Cell Signaling Technology.

Molecular Characterization: Recombinant hFGF9 has a calculated MW of 23,141 Da. Reduced and nonreduced protein migrates as a 23 kDa polypeptide. The expected amino terminus of recombinant hFGF9 was confirmed by amino acid sequencing.

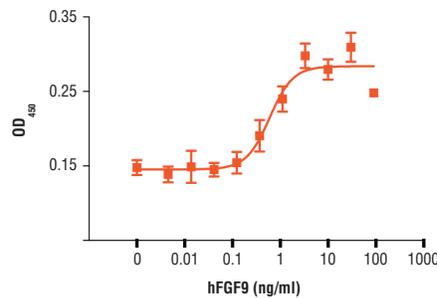
Endotoxin: Less than 0.01 ng endotoxin/1 µg hFGF9.

Purity: >95% as determined by SDS-PAGE of 6 µg reduced (+) and nonreduced (-) recombinant hFGF9. All lots are greater than 95% pure.



The purity of recombinant hFGF9 was determined by SDS-PAGE of 6 µg reduced (+) and nonreduced (-) recombinant hFGF9 and staining overnight with Coomassie Blue.

Bioactivity: The bioactivity of hFGF9 was determined in an NIH/3T3 cell proliferation assay. The ED₅₀ of each lot is between 0.05-0.80 ng/ml.



The proliferation of NIH/3T3 cells treated with increasing concentrations of hFGF9 was assessed. After 24 hr treatment, cells were labeled with BrdU for 4 hrs. BrdU incorporation was determined by ELISA and the OD₄₅₀ was determined.

Formulation: With carrier: Lyophilized from a 0.22 µm filtered solution of hFGF9 in 20 mM Tris, pH 7.2 containing 20 µg BSA per 1 µg hFGF9.

Carrier free: Lyophilized from a 0.22 µm filtered solution of hFGF9 in 20 mM Tris, pH 7.2.

Reconstitution:

With carrier: Add sterile TBS or TBS containing 1% bovine or human serum albumin or 5-10% FBS to a final hFGF9 concentration of greater than 50 µg/ml. Solubilize for 30 minutes at room temperature with occasional gentle vortexing.

Carrier free: Add sterile TBS or TBS containing protein to minimize absorption of hFGF9 to surfaces. Solubilize for 30 minutes at room temperature with occasional gentle vortexing. Stock hFGF9 should be greater than 50 µg/ml.

Storage: Stable in lyophilized state at 4°C for 1 year after receipt. Sterile stock solutions reconstituted with carrier protein are stable at 4°C for 2 months and at -20°C for 6 months. Avoid repeated freeze-thaw cycles.

Maintain sterility. Storage at -20°C should be in a manual defrost freezer.

Applications: Optimal concentration for the desired application should be determined by the user.

Background: Fibroblast growth factor (FGF) 9 is a member of the larger FGF family of proteins that play key roles in development, cancer, and metabolism. Binding of FGF9 to its receptor requires interaction with heparin and induces receptor dimerization, subsequent transphosphorylation, and downstream activation of Erk, Akt, and PLCγ pathways (1). FGF9 is important for organ development and bone repair (2-4).

Background References:

- (1) Itoh, N. and Ornitz, D.M. (2011) *J Biochem* 149, 121-30.
- (2) Yin, Y. et al. (2011) *Development* 138, 3169-77.
- (3) Barak, H. et al. (2012) *Dev Cell* 22, 1191-207.
- (4) Behr, B. et al. (2010) *Proc Natl Acad Sci U S A* 107, 11853-8.