# Cytokines

**Human Recombinant FGF-9**

Fibroblast growth factor 9

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|---|---|---|
| Catalog # | 78161 | 10 µg |
| | 78161.1 | 50 µg |

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## Product Description

Fibroblast growth factor (FGF) 9 is a pleiotropic member of the FGF family. FGFs are heparin-dependent regulators of cell proliferation and differentiation (Itoh & Ornitz). FGF-9 signals by binding FGFR3 (IIIb) and the IIIc splice variants of the FGFR1, FGFR2, and FGFR3 receptors (Santos-Ocampo et al.; Mohammadi et al.; Plotnikov et al.). In mice, deletion of FGF-9 is lethal and expression of FGF-9 affects development of the skeleton, cerebellum, lungs, heart, vascular system, digestive tract, and testes (Colvin et al.; Harada et al.; Lin et al.). Altered levels of FGF-9 have also been reported in various types of human cancers (Leushacke et al.; Abdel-Rahman et al.).

## Product Information

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| Alternative Names: | Fibroblast growth factor-9, GAF, Glia-activating factor, HBGF-9 |
| Accession Number: | P31371 |
| Amino Acid Sequence: | MAPLGEVGNY FGVQDAVPFG NVPVLPVDSP VLLSDHLGQS EAGGLPRGPA VTDLDHLKGI LRRRQLYCRT GFHLEIFPNG TIQGTRKDHS RFGILEFISI AVGLVSIRGV DSGLYLGMNE KGELYGSEKL TQECVFREQF EENWYNTYSS NLYKHVDTGR RYYVALNKDG TPREGTRTKR HQKFTHFLPR PVDPDKVPEL YKDILSQS |
| Predicted Molecular Mass: | 23.4 kDa |
| Species: | Human |
| Cross Reactivity: | Reported to be species-specific |
| Formulation: | Lyophilized after dialysis against phosphate-buffered saline. |
| Source: | E. coli |

## Specifications

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| Activity: | The specific activity is ≥ 5 x 10^5 units/mg (EC50 ≤ 2 ng/mL) as determined by a cell proliferation assay using 3T3 cells. |
| Purity: | ≥ 95% |
| Endotoxin Level: | Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein. |

## Preparation and Storage

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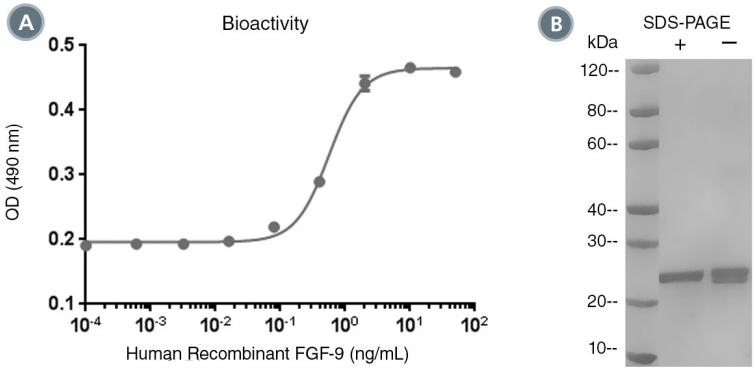
| Storage: | Store at -80°C. |
| Stability: | Stable as supplied for 12 months from date of receipt. |
| Preparation: | Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.<br><br>OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 2 weeks or at -20°C to -80°C for more than 3 months. Avoid repeated freeze-thaw cycles. |

## Data




(A) The biological activity of Human Recombinant FGF-9 was tested by its ability to promote the proliferation of 3T3 cells. Cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the example above is less than 2 ng/mL.
(B) 2 µg of Human Recombinant FGF-9 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant FGF-9 has a predicted molecular mass of 23.4 kDa.

## Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

## References

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Itoh N & Ornitz DM. (2008) Functional evolutionary history of the mouse Fgf gene family. Dev Dyn 237(1): 18–27.
Leushacke M et al. (2011) An RNA interference phenotypic screen identifies a role for FGF signals in colon cancer progression. PLoS One 6(8): e23381.
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Plotnikov AN et al. (2001) Crystal structure of fibroblast growth factor 9 reveals regions implicated in dimerization and autoinhibition. J Biol Chem 276(6): 4322–9.
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