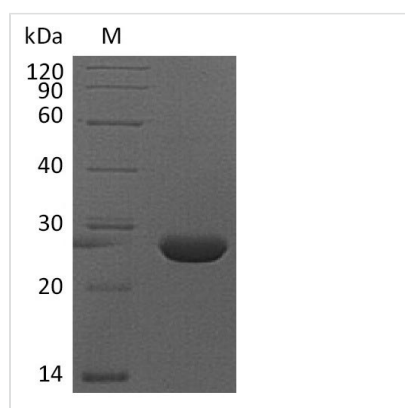




Recombinant Mouse Fibroblast growth factor 9 (Fgf9) (Active)

Product Code	CSB-AP004131MO
Abbreviation	Recombinant Mouse Fgf9 protein (Active)
Uniprot No.	P54130
Storage Buffer	0.2 μm Filtered 20 mM Tris-HCl, 150 mM NaCl, 5% Trehalose, 1 mM EDTA, 20% Glycerol, 1 mM DTT, pH 8.5
Product Type	Growth Factors
Immunogen Species	Mus musculus (Mouse)
Biological Activity	The ED50 as determined in a cell proliferation assay using Balb/3T3 mouse embryonic fibroblast cells is 4.14 ng/ml.
Purity	Greater than 95% as determined by SDS-PAGE.
Sequence	MAPLGEVGSYFGVQDAVPFGNVPVLPVDSPVLLSDHLGQSEAGGLPRGPAVT DLHLKGILRRRQLYCRTGFHLEIFPNGTIQGTRKDHSRFGILEFISIAVGLVSIR GVDSGLYLGMNEKGELYGSEKLTQECVFREQFEENWYNTYSSNLYKHVDTG RRYYVALNKDGTREGTRTKRHQKFTHFLPRPVDPKVPELYKDILSQS
Research Area	Signal Transduction
Source	E.coli
Target Names	Fgf9
Expression Region	1-208aa
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	24.4 kDa
Protein Length	Full Length

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Mouse Fibroblast Growth Factor 9 (Fgf9) is produced in E.coli and covers the full length of the protein, spanning amino acids 1-208. The protein



comes with an N-terminal 6xHis tag to make purification and detection more straightforward. Purity levels appear quite high, exceeding 95% based on SDS-PAGE analysis. Endotoxin content remains low at less than 1.0 EU/μg, as verified by the LAL method. The protein shows confirmed biological activity with an ED50 of 4.14 ng/ml in cell proliferation assays using Balb/3T3 mouse embryonic fibroblast cells.

Fibroblast Growth Factor 9 (Fgf9) belongs to the fibroblast growth factor family and plays important roles in cell growth, differentiation, and development. It seems particularly crucial for regulating embryonic development and tissue repair processes. When Fgf9 interacts with specific receptors, it activates signaling pathways that drive essential cellular processes. This makes it an attractive target for research in developmental biology and regenerative medicine.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Cell Proliferation and Growth Factor Signaling Studies

This recombinant mouse Fgf9 protein works well for investigating fibroblast growth factor signaling pathways across different cell culture systems. The confirmed biological activity with an ED50 of 4.14 ng/ml in Balb/3T3 mouse embryonic fibroblast cells gives researchers a solid foundation for dose-response experiments. Scientists can use this protein to examine downstream signaling cascades, study receptor binding kinetics, and observe how cells respond to FGF9 stimulation in controlled laboratory conditions.

2. Receptor Binding and Interaction Studies

The N-terminal 6xHis tag allows researchers to purify and immobilize this Fgf9 protein for receptor binding assays and protein-protein interaction studies. Techniques like surface plasmon resonance, bio-layer interferometry, or pull-down assays may help characterize how tightly and specifically FGF9 binds to its target receptors. The high purity (>95%) and low endotoxin levels make this protein appropriate for sensitive biochemical assays where contamination could be problematic.

3. Antibody Development and Validation

This recombinant mouse Fgf9 can work as either an immunogen or a standard when developing and testing antibodies specific to mouse FGF9. The full-length protein (1-208aa) expressed in E.coli likely provides native epitopes for antibody recognition, while the His-tag makes purification and quantification easier. Scientists can apply this protein in ELISA development, Western blot validation, and immunoassay standardization for detecting FGF9 in mouse samples.



4. Comparative Species and Functional Studies

Since this Fgf9 protein comes from mouse, it proves especially useful for comparative studies examining how FGF9 function and activity might differ between species. Researchers can compare the biological activity and receptor binding properties of mouse FGF9 with human or other mammalian versions in side-by-side experiments. The standardized expression system and activity testing provide a reliable reference point for these cross-species functional comparisons.

5. Drug Screening and Inhibitor Development

This biologically active recombinant Fgf9 works in high-throughput screening assays designed to identify small molecule inhibitors or modulators of FGF9 activity. The established ED50 value in Balb/3T3 cells gives researchers a baseline for developing cell-based screening assays to test compound libraries. Scientists can track changes in cell proliferation responses, which may help identify potential FGF9 pathway modulators worth pursuing in further preclinical studies.

Endotoxin	Less than 0.01 EU/μg as determined by LAL method.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.