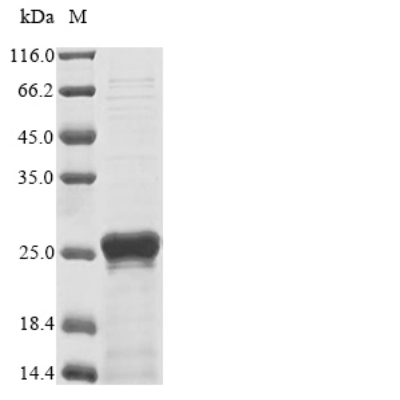
Recombinant Gorilla gorilla gorilla Fibroblast growth factor

Product Code	CSB-CF2954GKM
Abbreviation	Recombinant Gorilla gorilla gorilla Fibroblast growth factor protein
Storage	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.
Uniprot No.	G3QFY8
Storage Buffer	Lyophilized from Tris/PBS-based buffer, 6% Trehalose
Product Type	Transmembrane Proteins
Immunogen Species	Gorilla gorilla gorilla (Western lowland gorilla)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	HPIPDSSPLLQFGGQVRQRYLYTDDAQQTEAHLEIREDGTVGGAADQSPESLL QLKALKPGVIQILGVKTSRFLCQRPDGALYGSLHFDPEACSFRELLLEDGYNVY QSEAHGLPLHLPGNKSPHRDPAPRGPARFLPLPGLPPAPPEPPGILAPQPPDV GSSDPLSMVGPSQGRSPSYAS
Research Area	Others
Source	in vitro E.coli expression system
Target Names	FGF21
Protein Names	Recombinant Gorilla gorilla gorilla Fibroblast growth factor(FGF21)
Expression Region	29-209aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged
Mol. Weight	22.2 kDa
Protein Length	Full Length of Mature Protein
Image	



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

Description

This recombinant Gorilla gorilla gorilla Fibroblast Growth Factor comes from an in vitro E. coli expression system and contains the complete mature protein sequence spanning amino acids 29 to 209. The protein carries an N-terminal 10xHis-tag and shows greater than 85% purity when analyzed by SDS-PAGE. It's intended strictly for research purposes and works well in various experimental applications that demand high-quality reagents.

Fibroblast growth factors play essential roles in biological processes like cell growth, development, and tissue repair. These proteins participate in key signaling pathways that control how cells multiply and differentiate. This makes them particularly valuable for researchers working in developmental biology and regenerative medicine, where they may provide important clues about cellular responses and possible therapeutic uses.

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. Comparative Evolutionary Studies of Fibroblast Growth Factor Function

Scientists can use this recombinant gorilla FGF protein to explore evolutionary differences in growth factor signaling between great apes and humans through comparative biochemistry studies. Binding assays with human FGF receptors might reveal whether species-specific differences exist in receptor affinity or specificity. The N-terminal His-tag makes purification and immobilization straightforward for surface plasmon resonance experiments or similar binding kinetic studies. This type of research could shed light on how growth factor signaling pathways evolved in primates.

2. Development of Species-Specific Detection Antibodies

The recombinant gorilla FGF protein appears well-suited as both an immunogen and standard for creating antibodies that can tell gorilla and human FGF variants apart. Researchers can easily purify the His-tagged protein and

incorporate it into immunization protocols for producing monoclonal or polyclonal antibodies. These species-specific antibodies would likely prove valuable for studying gorilla tissue samples or creating assays that need to distinguish between different primate FGF proteins in comparative research.

3. Protein-Protein Interaction Mapping Studies

Scientists can attach the His-tagged gorilla FGF to nickel-affinity surfaces or beads for pull-down experiments aimed at finding new binding partners or cofactors. Incubating the immobilized protein with gorilla cell lysates or purified protein libraries may help map interaction networks specific to gorilla FGF. The tag also allows the protein to work in co-immunoprecipitation studies or as a probe in protein arrays, systematically characterizing its binding profile compared to human FGF variants.

4. Structural and Biophysical Characterization Studies

This recombinant protein provides material for detailed structural studies. These might include X-ray crystallography, NMR spectroscopy, or cryo-electron microscopy to determine gorilla FGF's three-dimensional structure. The purified protein works in biophysical analyses such as dynamic light scattering, analytical ultracentrifugation, or thermal stability assays to characterize its folding properties and stability. Comparing structures with human FGF could reveal species-specific features that may correlate with functional differences.

5. In Vitro Biochemical Assay Development

The recombinant gorilla FGF protein can work as a positive control or standard when developing biochemical assays for growth factor signaling pathway studies. Scientists can use this protein to establish baseline parameters for enzyme-linked immunosorbent assays (ELISA) or other quantitative detection methods. The His-tag allows easy capture and detection in sandwich-type assays, which makes it useful for optimizing assay conditions and validating detection reagents specific for gorilla FGF.

Shelf Life

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