



Recombinant Staphylococcus epidermidis Endoribonuclease MazF (mazF)

Product Code	CSB-EP880696FLL
Abbreviation	Recombinant Staphylococcus epidermidis mazF 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.	Q9F7V5
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Staphylococcus epidermidis
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MIRRGDVYLADLSPVQGSEQGGVRPVVVIQNDTGNKYSPTVIVAAITDGINKAKI PTHVEIEKKKYKLDKDSVILLEQIRTLDDKKRLKEKLTFLSESKMIEVDNALDISLG LNNFDHHKS
Research Area	Others
Source	E.coli
Target Names	mazF
Protein Names	Recommended name: mRNA interferase MazF EC= 3.1.-.-Alternative name(s): Endoribonuclease MazF Toxin MazF
Expression Region	1-120aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	19.0 kDa
Protein Length	Full Length
Image	



proteins that might interact with MazF endoribonuclease. Pull-down experiments could work with bacterial lysates or purified protein collections to capture proteins that appear to associate specifically with MazF. The >90% purity should minimize background interference from contaminating proteins during these interaction studies. This strategy might uncover components of toxin-antitoxin regulatory networks or cellular factors that could modulate MazF function.

2. Biochemical Characterization and Enzyme Kinetics Analysis

Researchers can use the purified recombinant MazF protein to develop in vitro ribonuclease activity assays with synthetic RNA substrates or bacterial RNA extracts. Optimal reaction conditions—pH, temperature, salt concentration, and cofactor requirements—can be determined through systematic testing. The high purity level should allow for precise protein quantification and what appears to be reliable kinetic parameter measurements. These studies would likely provide fundamental biochemical data on how *S. epidermidis* MazF endoribonuclease functions catalytically.

3. Antibody Development and Immunological Applications

The recombinant protein may serve as an effective immunogen for producing polyclonal or monoclonal antibodies specific to *S. epidermidis* MazF. The >90% purity should reduce cross-reactivity with other bacterial proteins during immunization procedures. Resulting antibodies could be useful for Western blotting, immunoprecipitation, or immunofluorescence studies to detect native MazF expression in bacterial cultures. The His-tag also makes it possible to develop sandwich ELISA assays for quantitative detection work.

4. Comparative Structure-Function Studies

The full-length recombinant protein (1-120aa) provides material for comparative analysis with MazF variants from other bacterial species. Proteolytic digestion experiments might map functional domains and identify regions that appear critical for ribonuclease activity. The purified protein enables systematic mutagenesis studies where researchers can modify specific amino acid residues and assess their effects on protein stability or function. Cross-species activity comparisons using standardized RNA substrates may reveal evolutionary conservation of catalytic mechanisms—though this remains to be fully established.

Shelf Life

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