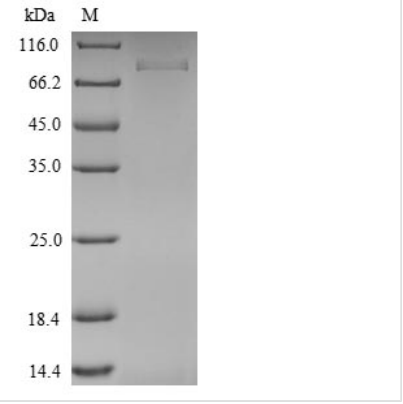
Recombinant Mouse Isthmin-1 (Ism1)

Product Code	CSB-YP011850MO
Relevance	Acts as an angiogenesis inhibitor.
Abbreviation	Recombinant Mouse Ism1 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.	A2ATD1
Product Type	Recombinant Protein
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	SDRQDAAAGNNNLNLESDSTSETSFPLSKEAPEEHQVVHQPFPRQRFPPETG HPSLQRDGPRSFLLDLPNFPDLSKADINGQNPNIQVTIEVVDGPDSEAEKDQH PENKPSWSLPAPDWRAWWQRSLSLARTNSGDQDDKYDSTSDDSNFLSVPR GWDRPAPGHRTFETKEQPEYDSTDGEGDWSLWSVCSVTCGNGNQKRTRSC GYACIATESRTCDRPNCPGIEDTFRTAATEVSLLAGSEEFNATKLFEVDMDSC ERWMSCKSEFLKKYMHKVINDLPSCPCSYPTEVAYSTADIFDRIKRKDFRWKD ASGPKEKLEIYKPTARYCIRSMLSLESTTLAAQHCCYGDNMQLITRGKGAGTP NLISTEFSAELHYKVDVLPWIICKGDWSRYNEARPPNNGQKCTESPSDEDYIK QFQEAREY
Research Area	others
Source	Yeast
Target Names	Ism1
Protein Names	Ism
Expression Region	30-454aa
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	50.1kDa
Protein Length	Full Length of Mature Protein
Image	



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

Description

Recombinant Mouse Isthmin-1 (Ism1) gets expressed in a yeast system and covers the full length of the mature protein, spanning amino acids 30 to 454. The protein comes with an N-terminal 6xHis tag, which makes purification and detection much easier. Purity levels reach above 90%, confirmed through SDS-PAGE analysis. This appears to ensure reliable performance for research work. The product is prepared under strict quality standards, which likely makes it appropriate for different experimental conditions.

Isthmin-1 (Ism1) has drawn attention in biological research because it seems to be involved in cellular processes like cell adhesion and angiogenesis. The protein may play an important role in regulating these pathways, helping scientists understand tissue development and repair mechanisms better. Researchers often work with Ism1 to explore how it functions and what it interacts with. This provides valuable insights into its significance in both normal physiology and disease states.

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. Protein-Protein Interaction Studies

This recombinant mouse Ism1 protein works well in pull-down assays for identifying potential binding partners or interacting proteins. The N-terminal 6xHis tag allows for immobilization on nickel-affinity resins, making it possible to capture associated proteins from cell lysates or tissue extracts. These studies could help clarify the molecular mechanisms behind Ism1 function in various biological processes. The high purity (>90%) suggests reliable results with minimal background interference from contaminating proteins.

2. Antibody Development and Validation

The recombinant Ism1 protein appears to be an ideal antigen for generating specific antibodies against mouse Ism1. Scientists can use this protein to

immunize animals for polyclonal antibody production or as a screening antigen for monoclonal antibody development. The protein also works for validating antibody specificity through techniques like ELISA, Western blotting, or surface plasmon resonance. The 6xHis tag offers an additional epitope for detection and purification monitoring during antibody characterization.

3. Structural and Biochemical Characterization

This full-length mature Ism1 protein (amino acids 30-454) can be used for biophysical studies to understand its structural properties and stability. Scientists can perform techniques such as circular dichroism spectroscopy, dynamic light scattering, or analytical ultracentrifugation to characterize protein folding, oligomerization state, and thermal stability. The yeast expression system may provide proper protein folding with potential post-translational modifications that are relevant to the native protein structure.

4. Cell-Based Functional Assays

The recombinant Ism1 protein can be added to cell culture systems to study its effects on cellular processes such as proliferation, differentiation, or migration. Scientists can treat various mouse cell lines with different concentrations of the protein to observe dose-dependent responses. The protein's stability and purity make it suitable for time-course experiments and co-culture studies. Such assays might provide insights into Ism1's role in cellular signaling pathways and tissue development.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
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.