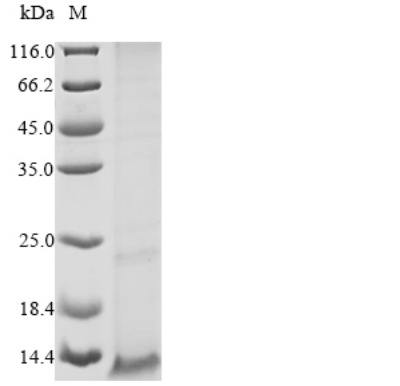
Recombinant Mouse Reactive oxygen species modulator 1 (Romo1)

Product Code	CSB-CF020063MO
Abbreviation	Recombinant Mouse Romo1 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.	P60603
Storage Buffer	Lyophilized from Tris/PBS-based buffer, 6% Trehalose
Product Type	Transmembrane Proteins
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MPVAVGPYGQSQPSCFDRVKMGFVMGCAVGMAAGALFGTFSCLRIGMRGR ELMGGIGKTMMQSGGTFGTFMAIGMGIRC
Research Area	Others
Source	in vitro E.coli expression system
Target Names	Romo1
Protein Names	Recommended name: Reactive oxygen species modulator 1 Short name= ROS modulator 1 Alternative name(s): Protein MGR2 homolog
Expression Region	1-79aa
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	11.0 kDa
Protein Length	Full Length
Image	



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

Description

Recombinant Mouse Reactive oxygen species modulator 1 (Romo1) is produced through an in vitro E.coli expression system and covers the full-length protein sequence from amino acids 1 to 79. The protein includes an N-terminal 10xHis-tag, which makes purification and detection more straightforward. SDS-PAGE analysis shows that Romo1 purity exceeds 85%, suggesting reliable performance for research work. This product is strictly for research use and should not be used for diagnostic or therapeutic purposes.

Reactive oxygen species modulator 1 (Romo1) appears to play an important role in how cells handle oxidative stress by managing reactive oxygen species (ROS) levels. The protein seems integral to various cellular pathways, particularly those involving mitochondrial function and oxidative stress responses. Research into Romo1 may be essential for understanding how it contributes to cellular balance and what this might mean for oxidative stress-related studies.

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. Antibody Development and Validation

This recombinant mouse Romo1 protein could work as an immunogen for creating polyclonal or monoclonal antibodies that target mouse Romo1 specifically. The N-terminal 10xHis tag makes purification easier and allows for straightforward immobilization during antibody screening. With purity above 85%, the protein should be suitable for immunization protocols and follow-up antibody characterization work. These antibodies might prove valuable for researchers investigating Romo1 expression and where it's located within mouse cell lines and tissues.

2. Protein-Protein Interaction Studies

Researchers can use the His-tagged recombinant Romo1 in pull-down experiments to find potential binding partners from mouse cell lysates or purified protein collections. The His tag allows for easy attachment to nickel-based resins during affinity purification experiments. Co-immunoprecipitation studies using this protein as bait may help reveal Romo1's role in cellular signaling networks. Since the protein covers the full length (1-79aa), all potential interaction sites should remain intact.

3. Biochemical Characterization and Stability Studies

This purified recombinant protein makes detailed biochemical analysis of mouse Romo1 possible, including measuring its molecular weight, isoelectric point, and how stable it is at different temperatures. Circular dichroism spectroscopy might

be used to examine secondary structure and track protein folding under various buffer conditions. The protein can also help establish the best storage conditions and test stability across different pH levels and temperature ranges for future experiments.

4. ELISA Development and Quantification Assays

The His-tagged Romo1 protein could serve as either a standard or coating antigen when developing enzyme-linked immunosorbent assays (ELISA) to measure Romo1 levels in biological samples. The tag enables oriented attachment to ELISA plates through metal chelation, which may improve how sensitive and reproducible the assay is. This application would likely be particularly useful for researchers studying how Romo1 expression changes when exposed to oxidative stress or other experimental conditions in mouse models.

Shelf Life

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