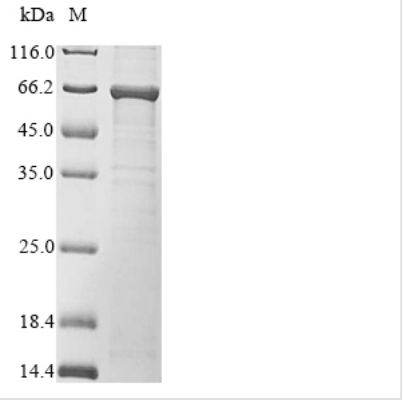
Recombinant Mouse Transforming growth factor beta activator LRRC33 (NRROS), partial

Product Code	CSB-EP807383MO
Abbreviation	Recombinant Mouse Nrros protein, partial
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.	Q8BMT4
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	ASQGGCKVVDGVADCRGLNLASVPSSLPPHSRMLILDANPLKDLWNHSLQAY PRLENLSLHSCHLDRISHYAFREQGHLRNLVLADNRLSENYKESAAALHTLLGL RRLDLSGNSLTEDMAALMLQNLSSLEVVSLARNTLMRLDDSIFEGLEHLVELDL QRNYIFEIEGGAFDGLTELRRLNLAYNNLPCIVDFSLTQLRFLNVSYNILEWFLA AREEVAFELEILDLSHNQLLFFPLLPQCGKLHTLLLQDNNMGFYRELYNTSSPQ EMVAQFLLVDGNVTNITTVNLWEEFSSSDLSALRFLDMSQNQFRHLPDGFLKK TPSLSHLNLNQNCLKMLHIREHEPPGALTELDLSHNQLAELHLAPGLTGSLRNL RVFNLSSNQLLGVPTGLFDNASSITTIDMSHNQISLCPQMVPVDWEGPPSCVD FRNMGSLRSLSLDGCGLKALQDCPFQGTSLTHLDLSSNWGVLNGSISPLWAV APTLQVLSLRDVGLGSGAAEMDFSAFGNLRALDLSGNSLTSFPKFKGSLALRT LDLRRNSLTALPQRVVSEQPLRGLQTIYLSQNPYDCCGVEGWGALQQHFKTV ADLSMVTCNLSSKIVRVVELPEGLPQGCKWEQVDTGL
Research Area	Others
Source	E.coli
Target Names	Nrros
Protein Names	Recommended name: Leucine-rich repeat-containing protein 33
Expression Region	29-651aa
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	73.2 kDa
Protein Length	Partial
Image	



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

Description

Recombinant Mouse Negative regulator of reactive oxygen species (Nrros) is produced in an E.coli expression system. This partial protein covers the 29-651 amino acid region and comes with an N-terminal 6xHis tag, which makes purification and detection more straightforward. SDS-PAGE analysis shows the product reaches a purity level greater than 85%, suggesting it should be reliable for research applications. The product is intended for research use only. No endotoxin level has been specified.

Negative regulator of reactive oxygen species (Nrros) appears to play a crucial role in how cells manage oxidative stress by controlling reactive oxygen species production. This protein seems particularly significant for researchers studying cellular redox balance and oxidative stress pathways. Research on Nrros may provide insights into the mechanisms that protect cells from oxidative damage - something that's vital for understanding various physiological and pathological processes.

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 Nrros protein works well in pull-down assays for identifying potential binding partners involved in reactive oxygen species regulation pathways. The N-terminal 6xHis tag makes it easy to immobilize on nickel-affinity matrices for co-immunoprecipitation experiments with mouse cell lysates or tissue extracts. Studies like these could help clarify the molecular mechanisms by which Nrros functions as a negative regulator in oxidative stress responses. The partial protein construct (29-651aa) may still retain key interaction domains that are necessary for binding partner identification.

2. Antibody Development and Validation

The purified recombinant protein serves as a solid immunogen for generating

mouse Nrros-specific antibodies in rabbits or other suitable host species. Both the high purity (>85%) and substantial size of this protein fragment make it appropriate for polyclonal and monoclonal antibody production. Researchers can validate generated antibodies using ELISA, Western blot, and immunoprecipitation assays with the same recombinant protein as a positive control. These antibodies would likely become valuable research tools for studying endogenous Nrros expression and localization in mouse tissues and cell lines.

3. Biochemical Characterization and Structural Studies

This recombinant protein can be used for detailed biochemical analysis, including determining molecular weight, isoelectric point, and thermal stability profiles. The 6xHis tag makes purification straightforward for biophysical studies such as dynamic light scattering, circular dichroism spectroscopy, and analytical ultracentrifugation. These analyses would provide insights into the protein's folding state, oligomerization behavior, and overall structural properties. Such characterization appears essential for understanding the molecular basis of Nrros function in cellular oxidative stress regulation.

4. In Vitro Functional Assays

The recombinant Nrros protein can be incorporated into cell-free biochemical assays to study its role in reactive oxygen species regulation pathways. While biological activity hasn't been tested, the protein can be used in reconstitution experiments with other purified components of ROS signaling cascades. The His-tagged protein allows for controlled addition and removal from reaction mixtures. This enables systematic analysis of its effects on various oxidative stress-related enzymatic activities. Studies like these could help define the specific molecular mechanisms underlying Nrros-mediated negative regulation.

Shelf Life

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