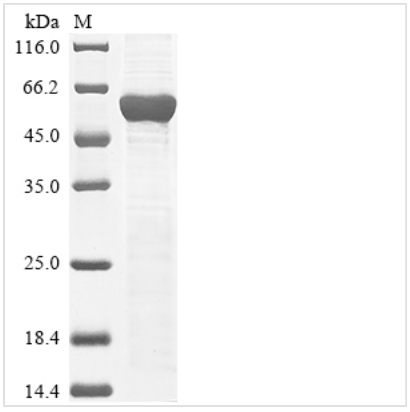
Recombinant Mouse Leucine-rich repeat LGI family member 3 (Lgi3)

Product Code	CSB-EP812997MO
Abbreviation	Recombinant Mouse Lgi3 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.	Q8K406
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	KRPPKTPPCPPSCSCTRDTAFCVDSKSVPKNLPSEVISLTLVNAAFSEIQDGAF SHLPLLQFLLLNSNKFTLIGDNAFIGLSHLQYLFIENNDIWALSKFTFRGLKSLTH LSLANNNLQTLPRDIFRPLDILSDLDLRGNALNCDCKVKWLVEWLAHTNTTVAP IYCASPPRFQEHKVQDLPLREFDCITTDFVLYQTLSFPAVSAEPFLYSSDLYLAL AQPGASACTILKWDYVERQLRDYDRIPAPSAVHCKPMVVDGQLYVVVAQLFG GSYIYHWDPNTTRFTKLQDIDPQRVRKPNDLEAFRIDGDWFFAVADSSKAGAT SLYRWHQNGFYSHQALHAWHRDTDLEFVDGEGKPRLIVSSSSQAPVIYQWSR SQKQFVAQGEVTQVPDAQAVKHFRAGRDSYLCLSRYIGDSKILRWEGTRFSE VQALPSRGSLALQPFLVGGHRYLALGSDFSFTQIYQWDEGRQKFVRFQELAV QAPRAFCYMPAGDAQLLLAPSFKGQTLVYRHVVVDLSA
Research Area	Neuroscience
Source	E.coli
Target Names	Lgi3
Protein Names	Recommended name: Leucine-rich repeat LGI family member 3 Alternative name(s): Leubrin Leucine-rich glioma-inactivated protein 3
Expression Region	31-548aa
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	62.7 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

Recombinant Mouse Leucine-rich repeat LGI family member 3 (Lgi3) is produced in E. coli and consists of the full length of the mature protein, covering amino acids 31-548. The protein carries an N-terminal 6xHis tag, which makes purification and detection more straightforward. SDS-PAGE analysis shows the product achieves greater than 85% purity—a level that appears adequate for most research applications.

Lgi3 belongs to the leucine-rich repeat LGI family, which seems to be involved in various cellular processes. This protein may play roles in signal transduction pathways and has drawn interest in studies examining cellular communication and neuronal function. Its apparent importance in modulating cell-to-cell interactions makes it a potentially valuable target for research in neurobiology and cell biology.

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 Using His-Tag Pull-Down Assays

The N-terminal 6xHis tag on this recombinant mouse Lgi3 protein allows for nickel-affinity based pull-down experiments to identify potential binding partners. Leucine-rich repeat domains—characteristic features of LGI family proteins—are known to mediate protein-protein interactions. This makes the construct well-suited for screening cellular lysates or purified protein libraries. The >85% purity level should be adequate for pull-down assays where His-tagged Lgi3 gets immobilized on nickel beads and used to capture interacting proteins for subsequent mass spectrometry analysis.

2. Antibody Development and Validation

This purified recombinant mouse Lgi3 protein can serve as an immunogen for generating polyclonal or monoclonal antibodies specific to mouse Lgi3. The full-length mature protein (31-548aa) provides comprehensive epitope coverage for

antibody development. The purified protein also works as a positive control in Western blotting, ELISA, or immunoprecipitation experiments to validate antibody specificity and determine optimal working concentrations.

3. Biochemical Characterization and Stability Studies

Researchers can subject the recombinant protein to various biochemical analyses to characterize its biophysical properties. These might include thermal stability, pH tolerance, and aggregation behavior using techniques such as dynamic light scattering, differential scanning calorimetry, and size exclusion chromatography. Such studies would likely provide fundamental information about the protein's stability profile and optimal storage conditions for research applications.

4. Comparative Species Analysis in Cross-Reactivity Studies

This mouse Lgi3 protein can be used in comparative studies with human or other mammalian LGI3 orthologs to assess evolutionary conservation and species-specific differences. The purified protein serves as a reference standard for cross-reactivity testing of antibodies or binding assays developed for different species. This may contribute to translational research efforts between mouse models and human studies.

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.