Recombinant MILK2 protein (His tag)

Catalog Number	545392
Synonyms	Junctional Rab13-binding protein; Molecule interacting with CasL-like 2; MICAL-L2
Species	Human
Expression System	E. coli
Accession	Q8IY33
Molecular Weight	Predictes a molecular mass of 14.14 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	1-107
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-107 aa (Q8IY33) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human MICALL2 (MICAL-like protein 2) Fragment (1-107) is a high-purity protein preparation encompassing the complete Calponin-homology (CH) domain. This fragment serves as an essential research tool for investigating the structural and functional properties of MICALL2, particularly its role in cell adhesion, cytoskeleton reorganization, and junctional complex assembly. MICAL-like protein 2 (MICALL2) functions as an effector of small Rab GTPases and plays a critical role in the assembly of junctional complexes by regulating the transport of cell adhesion molecules to the plasma membrane and reorganizing the actin cytoskeleton. The protein mediates the endocytic recycling of occludins, claudins, and E-cadherin, thereby influencing the establishment of tight junctions and adherens junctions. MICALL2 also contributes to actin cytoskeleton reorganization through direct interaction with F-actin or indirectly via actinins and filamins. It is implicated in epithelial cell differentiation, cell spreading, and neurite outgrowth processes. Additionally, MICALL2 undergoes liquid-liquid phase separation to form tubular recycling endosomes, where it sequentially organizes phase separation and promotes endosomal tubulation through interaction with RAB8A. The protein localizes to multiple cellular compartments including the cell membrane, tight junctions, recycling endosomes, cell projections, and the cytoskeleton, highlighting its diverse functional roles in cellular organization and trafficking.