Recombinant GRM2A protein (His tag)

Catalog Number	540669
Species	Human
Expression System	E. coli
Accession	Q8IUY3
Molecular Weight	Predictes a molecular mass of 15.10 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	66-181
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 66-181 aa (Q8IUY3) 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 GRAM domain-containing protein 2A (GRAMD2A) fragment (amino acids 66-181) from Homo sapiens, encompassing the complete GRAM functional domain. This high-purity protein is an essential tool for investigating endoplasmic reticulum-plasma membrane contact site organization, calcium homeostasis, and phosphoinositide-dependent membrane interactions in cellular signaling research. GRAM domain-containing protein 2A (GRAMD2A) is a human protein that plays a critical role in organizing endoplasmic reticulum-plasma membrane contact sites (EPCS) with pleiotropic functions including STIM1 recruitment and calcium homeostasis. It serves as a constitutive tether that co-localizes with ESYT2/3 tethers at EPCS in a phosphatidylinositol lipid-dependent manner. GRAMD2A pre-marks phosphatidylinositol 4,5-biphosphate (PI(4,5)P2)-enriched EPCS destined for the store-operated calcium entry pathway (SOCE). The protein localizes to both endoplasmic reticulum membrane as a single-pass membrane protein and cell membrane as a peripheral membrane protein, specifically targeting distinct EPCS compared to related proteins like GRAMD1A. Its membrane anchoring at the ER and PM binding is mediated through GRAM domain and phosphatidylinositol lipid interactions.