Recombinant BIG2 protein (His tag)

Catalog Number	548616
Synonyms	Brefeldin A-inhibited GEP 2; ADP-ribosylation factor guanine nucleotide-exchange factor 2
Species	Human
Expression System	E. coli
Accession	Q9Y6D5
Molecular Weight	Predictes a molecular mass of 44.40 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	632-1007
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 632-1007 aa (Q9Y6D5) 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	Introducing the recombinant Brefeldin A-inhibited guanine nucleotide-exchange protein 2 (ARFGEF2) fragment (residues 632-1007), a high-purity tool designed for studying guanine nucleotide exchange mechanisms. This fragment encompasses the critical SEC7 domain, enabling researchers to investigate ARF protein activation, vesicular transport regulation, and Golgi-endosomal trafficking with precision. The full-length Brefeldin A-inhibited guanine nucleotide-exchange protein 2 (ARFGEF2) is a key regulator of intracellular trafficking, primarily promoting GDP-to-GTP exchange on ADP-ribosylation factors (ARFs) including ARF1, ARF3, ARF5, and ARF6. It plays essential roles in maintaining Golgi apparatus integrity, endosomal compartment organization, and vesicular transport between the trans-Golgi network and endosomes. The protein is implicated in multiple cellular processes including AP-1 complex membrane association, transferrin receptor recycling, GABA(A) receptor ER exit, and TNF receptor secretion via exosomes. Localized to cytoplasm, membranes, Golgi apparatus, endosomes, and synaptic regions, it may also function as an A-kinase anchoring protein, suggesting crosstalk between ARF and PKA signaling pathways. The provided fragment (632-1007) contains the SEC7 domain, which mediates the core nucleotide exchange activity, making it invaluable for dissecting specific molecular interactions in membrane trafficking research.