Recombinant BGIN protein (His tag)

Catalog Number	547559
Synonyms	Chimeric SH3BP1-PDXP protein
Species	Human
Expression System	E. coli
Accession	Q6ZT62
Molecular Weight	Predictes a molecular mass of 51.64 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	41-489
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 41-489 aa (Q6ZT62) 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 Bargin (Chimeric SH3BP1-PDXP protein) recombinant fragment (residues 41-489), a 449-amino acid protein designed to encompass the Rho-GAP domain. This high-purity fragment serves as an essential tool for investigating GTPase regulation, specifically targeting RAC1 and CDC42 inactivation, making it ideal for functional and mechanistic studies in cellular signaling pathways. Bargin, encoded by the BARGIN gene in Homo sapiens, functions as a GTPase activating protein (GAP) that specifically converts GTP-bound RAC1 and CDC42 into their inactive GDP-bound forms. Its activity is enhanced by K-29 and K-48 polyubiquitin chain binding, highlighting its regulatory role in cellular processes. The protein localizes to the cell membrane as a peripheral membrane protein and is also found in the cytosol, with membrane localization increasing upon poly-ubiquitin binding. Notably, Bargin is enriched in tangle aggregates in Alzheimer's disease brain cells, suggesting potential relevance in neurodegenerative research. The provided fragment (41-489) retains the Rho-GAP domain (residues 284-477), enabling focused studies on domain-specific functions without interference from other regions.