Recombinant BIN1 protein (His tag)

Catalog Number	546410
Synonyms	Amphiphysin II; Amphiphysin-like protein; Box-dependent myc-interacting protein 1; Bridging integrator 1
Species	Human
Expression System	E. coli
Accession	O00499
Molecular Weight	Predictes a molecular mass of 10.67 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	516-593
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 516-593 aa (O00499) 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 BIN1 (Amphiphysin II) SH3 Domain Fragment (aa 516-593) is a high-purity protein fragment designed for studying membrane curvature regulation, endocytosis, and actin dynamics. This 78-amino acid fragment fully encompasses the functional SH3 domain, providing an essential tool for investigating domain-specific interactions in cellular processes such as T-tubule formation, vesicle sorting, and amyloid-beta production control. BIN1 (Bridging Integrator 1) is a key regulator of plasma membrane curvature, membrane shaping, and remodeling in human cells. It plays critical roles in T-tubule formation in muscle cells for depolarization-contraction coupling, acts as a negative regulator of endocytosis, and modulates intracellular vesicle sorting including BACE1 trafficking and amyloid-beta production control. The protein also demonstrates actin bundling activity and stabilizes actin filaments against depolymerization. BIN1 localizes to multiple cellular compartments including the nucleus, cytoplasm, endosomes, and cell membrane/sarcolemma/T-tubules, with isoform-specific localization patterns. The SH3 domain contained in this fragment mediates protein-protein interactions essential for BIN1's multifunctional roles in membrane dynamics and cellular signaling pathways.