Recombinant SV2C protein (His tag)

Catalog Number	538162
Species	Human
Expression System	E. coli
Accession	Q496J9
Molecular Weight	Predictes a molecular mass of 15.80 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 17 kDa band.

Product Information

Sequence Region	459-578
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 459-578 aa (Q496J9) 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 Synaptic Vesicle Glycoprotein 2C (SV2C) Fragment (aa 459-578) - A highly stable and soluble protein fragment ideal for structural studies, biochemical characterization, and neurotoxin interaction research. This 120-amino acid fragment maintains key structural properties while offering enhanced experimental utility for investigating synaptic vesicle function and botulinum neurotoxin mechanisms. Synaptic vesicle glycoprotein 2C (SV2C) plays a critical role in regulating secretion in neural and endocrine cells, specifically enhancing low-frequency neurotransmission by maintaining the readily releasable pool of secretory vesicles and positively regulating vesicle fusion. The protein localizes to cytoplasmic vesicles, secretory vesicles, and synaptic vesicle membranes, and is enriched in small synaptic vesicles and adrenal microsomes. Notably, SV2C serves as a receptor for Clostridium botulinum neurotoxin type A (BoNT/A), where recognition involves both protein-protein interactions and N-glycosylation at Asn-559, with glycosylation enhancing affinity for the toxin. The protein also functions as a receptor for the closely related BoNT/A2 neurotoxin and potentially for BoNT/D, highlighting its significance in both normal neuronal function and pathogenic mechanisms.