

Recombinant Rat SYT11 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52198

Size: 10ug, 100ug

Protein Name: Synaptotagmin-11 (Synaptotagmin XI) (SytXI)

Synonym: Syt11

UniProt ID: O08835

UniProt Link: www.uniprot.org/uniprotkb/O08835/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 430 AA

Molecular Weight: 48 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAEITNIRPSFDVSPVAAGLIGASVLVVCVSVTVFVWTCCHQQAEEKKHKTTPPYKFIHMLKGISIYPETL
SNKKKIIKVRDKDGSHRESGRGNLLVNAESGLLSHDRDPRGPSPASCIDQLPIKRDYGEELRSPMT
SLTPGESKPTSPSSPEEDVMLGSLTFSVDYNFPKKALVVTIQEAHGLPVMGQTQGSDPYIKMTILP
DKRHRVKTRVLRKTLDPVFDETFYGYPIYSQLQDLVLHFLVLSFDRFSRDDVIGVEMVPLAGVDPST
GKVQLTRDIIKRNIQKCISRGELQVSLSYQPVAQRMTVVVLKARHLPKMDITGLSGNPYVKVNVYYGR
KRIAKKKTHVKKCTLNPIFNESFIYDIPTDLLPDISIEFLVIDFDRTTKNEVVGRLLGAHSVTTSGAEHW
REVCESPRKPVAKWHSLSLEY

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Synaptotagmin-11 (Synaptotagmin XI) (SytXI) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Synaptotagmin family member involved in vesicular and membrane trafficking which does not bind Ca(2+) (PubMed:9162066). Inhibits clathrin-mediated and bulk endocytosis in neurons, functions to ensure precision in vesicle retrieval (PubMed:26589353, PubMed:29311685). Plays an important role in dopamine transmission by regulating endocytosis and the vesicle-recycling process (PubMed:29311685). Essential component of a neuronal vesicular trafficking pathway that differs from the synaptic vesicle trafficking pathway but is crucial for development and synaptic plasticity. In macrophages and microglia, inhibits the conventional cytokine secretion, of at least IL6 and TNF, and phagocytosis. In astrocytes, regulates lysosome exocytosis, mechanism required for the repair of injured astrocyte cell membrane (By similarity). Required for the ATP13A2-mediated regulation of the autophagy-lysosome pathway (By similarity).

Subcellular Localization: Cytoplasmic vesicle membrane ; Single-pass membrane protein . Perikaryon . Golgi apparatus, trans-Golgi network membrane ; Single-pass membrane protein . Recycling endosome membrane ; Single-pass membrane protein . Lysosome membrane ; Single-pass membrane protein . Cytoplasmic vesicle, phagosome . Cell projection, axon . Cell projection, dendrite . Postsynaptic density . Cytoplasmic vesicle, clathrin-coated vesicle membrane ; Single-pass membrane protein . Perikaryon . Note=Localized in vesicles that travels in axonal and dendritic shafts in both anterograde and retrograde directions. In macrophages and microglia, recruited in phagosomes at early stages of phagocytosis.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.