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CLN3 Blocking Peptide (Center)
Synthetic peptide
Catalog # BP20845c

Specification

CLN3 Blocking Peptide (Center) - Product Information

Primary Accession	Q13286
Other Accession	Q60HH0

CLN3 Blocking Peptide (Center) - Additional Information

Gene ID 1201

Other Names
Battenin, Batten disease protein, Protein CLN3, CLN3, BTS

Target/Specificity
The synthetic peptide sequence is selected from aa 250-264 of HUMAN CLN3

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CLN3 Blocking Peptide (Center) - Protein Information

Name CLN3 (HGNC:2074)

Synonyms BTS

Function
Mediates microtubule-dependent, anterograde transport connecting the Golgi network, endosomes, autophagosomes, lysosomes and plasma membrane, and participates in several cellular processes such as regulation of lysosomal pH, lysosome protein degradation, receptor-mediated endocytosis, autophagy, transport of proteins and lipids from the TGN, apoptosis and synaptic transmission (PubMed:10924275, PubMed:18817525, PubMed:18317235, PubMed:22261744, PubMed:15471887, PubMed:20850431). Facilitates the proteins transport from trans-Golgi network (TGN)-to other membrane compartments such as transport of microdomain-associated proteins to

the plasma membrane, IGF2R transport to the lysosome where it regulates the CTSD release leading to regulation of CTSD maturation and thereby APP intracellular processing (PubMed:10924275, PubMed:18817525). Moreover regulates CTSD activity in response to osmotic stress (PubMed:23840424, PubMed:28390177). Also binds galactosylceramide and transports it from the trans Golgi to the rafts, which may have immediate and downstream effects on cell survival by modulating ceramide synthesis (PubMed:18317235). At the plasma membrane, regulates actin-dependent events including filopodia formation, cell migration, and pinocytosis through ARF1-CDC42 pathway and also the cytoskeleton organization through interaction with MYH10 and fodrin leading to the regulation of the plasma membrane association of Na+, K+ ATPase complex (PubMed:20850431). Regulates synaptic transmission in the amygdala, hippocampus, and cerebellum through regulation of synaptic vesicles density and their proximity to active zones leading to modulation of short-term plasticity and age-dependent anxious behavior, learning and memory (By similarity). Regulates autophagic vacuoles (AVs) maturation by modulating the trafficking between endocytic and autophagolysosomal/lysosomal compartments, which involves vesicle fusion leading to regulation of degradation process (By similarity). Participates also in cellular homeostasis of compounds such as, water, ions, amino acids, proteins and lipids in several tissue namely in brain and kidney through regulation of their transport and synthesis (PubMed:17482562).

Cellular Location
Lysosome membrane; Multi-pass membrane protein. Late endosome. Lysosome. Golgi apparatus. Golgi apparatus membrane. Golgi apparatus, Golgi stack. Golgi apparatus, trans-Golgi network. Cell membrane Recycling endosome. Membrane raft. Membrane, caveola. Early endosome membrane. Synapse, synaptosome {ECO:0000250|UniProtKB:Q61124}. Late endosome membrane {ECO:0000250|UniProtKB:Q61124}. Cytoplasmic vesicle, autophagosome {ECO:0000250|UniProtKB:Q61124}. Note=CLN3 is not present in late endosomes/lysosomes in fibroblasts and neurons (PubMed:15240864) Trafficks from cell membrane to Golgi via endosomes (PubMed:15240864) Osmotic stress changes the subcellular localization of CLN3 (PubMed:23840424). Trafficks to intracellular compartments via the plasma membranet through AP3M1-dependent mechanisms (PubMed:14644441) Excluded from the synaptic vesicles (By similarity) {ECO:0000250|UniProtKB:Q61124, ECO:0000269|PubMed:14644441, ECO:0000269|PubMed:15240864, ECO:0000269|PubMed:23840424}

Tissue Location
Expressed in the cortical brain, pancreas, spleen, and testis with weaker expression in the peripheral nerve (at protein level). Highly expressed in gray matter (at protein level)

CLN3 Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CLN3 Blocking Peptide (Center) - Images

CLN3 Blocking Peptide (Center) - Background

Involved in microtubule-dependent, anterograde transport of late endosomes and lysosomes.

CLN3 Blocking Peptide (Center) - References

Lerner T.J.,et al.Cell 82:949-957(1995).
Mitchison H.M.,et al.Genomics 40:346-350(1997).
LaFauci G.,et al.Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
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Ota T.,et al.Nat. Genet. 36:40-45(2004).