

**CLN3 Antibody (Center) Blocking peptide**  
Synthetic peptide  
Catalog # BP13304c**Specification****CLN3 Antibody (Center) Blocking peptide -  
Product Information**Primary Accession [Q13286](#)**CLN3 Antibody (Center) Blocking peptide -  
Additional Information**

Gene ID 1201

**Other Names**Battenin, Batten disease protein, Protein  
CLN3, CLN3, BTS**Target/Specificity**

The synthetic peptide sequence used to generate the antibody AP13304c was selected from the Center region of CLN3. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**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 Antibody (Center) Blocking peptide -  
Protein Information**Name CLN3 ([HGNC:2074](#))

Synonyms BTS

**Function****CLN3 Antibody (Center) Blocking peptide -  
Background**

This gene encodes a protein that is involved in lysosomal function. Mutations in this, as well as other neuronal ceroid-lipofuscinosis (CLN) genes, cause neurodegenerative diseases commonly known as Batten disease or collectively known as neuronal ceroid lipofuscinoses (NCLs). Many alternatively spliced transcript variants have been found for this gene.

**CLN3 Antibody (Center) Blocking peptide -  
References**

Adams, H.R., et al. Dev Med Child Neurol 52(7):637-643(2010) Imielinski, M., et al. Nat. Genet. 41(12):1335-1340(2009) Sarpong, A., et al. Clin. Genet. 76(1):38-45(2009) Codlin, S., et al. J. Cell. Sci. 122 (PT 8), 1163-1173 (2009) Tuxworth, R.I., et al. Hum. Mol. Genet. 18(4):667-678(2009)

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:<a href="http://www.uniprot.org/citations/10924275" target="\_blank">10924275</a>, PubMed:<a href="http://www.uniprot.org/citations/18817525" target="\_blank">18817525</a>, PubMed:<a href="http://www.uniprot.org/citations/18317235" target="\_blank">18317235</a>, PubMed:<a href="http://www.uniprot.org/citations/22261744" target="\_blank">22261744</a>, PubMed:<a href="http://www.uniprot.org/citations/15471887" target="\_blank">15471887</a>, PubMed:<a href="http://www.uniprot.org/citations/20850431" target="\_blank">20850431</a>). 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:<a href="http://www.uniprot.org/citations/10924275" target="\_blank">10924275</a>, PubMed:<a href="http://www.uniprot.org/citations/18817525" target="\_blank">18817525</a>). Moreover regulates CTSD activity in response to osmotic stress (PubMed:<a href="http://www.uniprot.org/citations/23840424" target="\_blank">23840424</a>, PubMed:<a href="http://www.uniprot.org/citations/28390177" target="\_blank">28390177</a>). 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:<a href="http://www.uniprot.org/citations/18317235" target="\_blank">18317235</a>). 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<sup>+</sup>, K<sup>+</sup> ATPase complex (PubMed:<a href="http://www.uniprot.org/citations/20850431" target="\_blank">20850431</a>).

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:<a href="http://www.uniprot.org/citations/17482562" target="\_blank">17482562</a>).

#### 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. Cell junction, 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 Antibody (Center) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)