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PICALM Blocking Peptide (Center)

Synthetic peptide
Catalog # BP21487c

Specification

PICALM Blocking Peptide (Center) - Product Information

Primary Accession Q13492

PICALM Blocking Peptide (Center) - Additional Information

Gene ID 8301

Other Names
Phosphatidylinositol-binding clathrin assembly protein, Clathrin assembly lymphoid myeloid leukemia protein, PICALM, CALM

Target/Specificity
The synthetic peptide sequence is selected from aa 385-395 of HUMAN PICALM

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.

PICALM Blocking Peptide (Center) - Protein Information

Name PICALM

Synonyms CALM

Function
Cytoplasmic adapter protein that plays a critical role in clathrin-mediated endocytosis which is important in processes such as internalization of cell receptors, synaptic transmission or removal of apoptotic cells. Recruits AP-2 and attaches clathrin triskelions to the cytoplasmic side of plasma membrane leading to clathrin-coated vesicles (CCVs) assembly (PubMed:10436022, PubMed:16262731, PubMed:27574975). Furthermore, regulates clathrin-coated vesicle size and maturation by directly sensing and driving membrane curvature (PubMed:25898166). In addition to binding to clathrin, mediates the endocytosis of small R- SNARES (Soluble NSF Attachment Protein REceptors) between plasma membranes and endosomes including VAMP2, VAMP3, VAMP4, VAMP7 or VAMP8 (PubMed:<a

href="http://www.uniprot.org/citations/21808019" target="_blank">21808019, PubMed:22118466, PubMed:23741335). In turn, PICALM- dependent SNARE endocytosis is required for the formation and maturation of autophagic precursors (PubMed:25241929). Modulates thereby autophagy and the turnover of autophagy substrates such as MAPT/TAU or amyloid precursor protein cleaved C-terminal fragment (APP- CTF) (PubMed:24067654, PubMed:25241929).

Cellular Location
Cell membrane. Membrane, clathrin-coated pit. Golgi apparatus. Cytoplasmic vesicle, clathrin-coated vesicle. Nucleus. Note=Colocalized with clathrin in the Golgi area (PubMed:10436022). Interaction with PIMREG may target PICALM to the nucleus in some cells (PubMed:16491119)

Tissue Location
Expressed in all tissues examined.

PICALM Blocking Peptide (Center) - Protocols

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

- Blocking Peptides

PICALM Blocking Peptide (Center) - Images

PICALM Blocking Peptide (Center) - Background

Assembly protein recruiting clathrin and adapter protein complex 2 (AP2) to cell membranes at sites of coated-pit formation and clathrin-vesicle assembly. May be required to determine the amount of membrane to be recycled, possibly by regulating the size of the clathrin cage. Involved in AP2-dependent clathrin-mediated endocytosis at the neuromuscular junction.

PICALM Blocking Peptide (Center) - References

Dreyling M.H.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:4804-4809(1996).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Nakajima D.,et al.Submitted (MAR-2005) to the EMBL/GenBank/DDBJ databases.
Taylor T.D.,et al.Nature 440:497-500(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.