10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PICALM Rabbit pAb

Catalog # AP98809

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q13492
Other Accession	Q13492
Reactivity	Rat, Mouse
Predicted	Human, Zebrafish, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	70755
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PICALM/CALM
Epitope Specificity	251-350/652
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 ENTH (epsin N-terminal homology) domain.
SUBUNIT	Binds clathrin; involves primarily the C-terminal sequences, but the full-length protein is required for full binding capacity. Binds phosphatidylinositol 4,5-bisphosphate.
DISEASE	Note=A chromosomal aberration involving PICALM is found in diffuse histiocytic lymphomas. Translocation t(10;11)(p13;q14) with MLLT10.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a clathrin assembly protein, which recruits clathrin and adaptor protein complex 2 (AP2) to cell membranes at sites of coated-pit formation and clathrin-vesicle assembly. The protein may be required to determine the amount of membrane to be recycled, possibly by regulating the size of the clathrin cage. The protein is involved in AP2-dependent clathrin-mediated endocytosis at the neuromuscular junction. A chromosomal translocation t(10;11)(p13;q14) leading to the fusion of this gene and the MLLT10 gene is found in acute lymphoblastic leukemia, acute myeloid leukemia and malignant lymphomas. The polymorphisms of this gene are associated with the risk of Alzheimer disease. Multiple alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2011]

Additional Information

Gene ID	8301
Other Names	CALM; CLTH; LAP; PAP180; fit-1; fit1; mKIAA4114; PICAL_HUMAN; PICALM; Clathrin assembly lymphoid myeloid leukemia protein; PICAL_MOUSE; Clathrin assembly lymphoid myeloid leukemia (CALM); PICAL_RAT; Clathrin assembly lymphoid myeloid leukemia protein (rCALM); phosphatidylinositol

	binding clathrin assembly protein
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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: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.

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