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SYT7 antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI15124

Product Information

Application	WB
Primary Accession	O43581
Other Accession	NM_001252065, NP_001238994
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45501

Additional Information

Gene ID	9066
Alias Symbol	IPCA-7, MGC150517, PCANAP7, SYT-VII
Other Names	Synaptotagmin-7, IPCA-7, Prostate cancer-associated protein 7, Synaptotagmin VII, SytVII, SYT7, PCANAP7
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-SYT7 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	SYT7 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SYT7 (HGNC:11514)
Synonyms	PCANAP7
Function	Ca(2+) sensor involved in Ca(2+)-dependent exocytosis of secretory and synaptic vesicles through Ca(2+) and phospholipid binding to the C2 domain (By similarity). Ca(2+) induces binding of the C2- domains to phospholipid membranes and to assembled SNARE-complexes; both actions contribute to triggering exocytosis (By similarity). SYT7 binds Ca(2+) with high affinity and slow kinetics compared to other synaptotagmins (By similarity). Involved in Ca(2+)-triggered lysosomal exocytosis, a major component of the plasma membrane repair (PubMed:11342594). Ca(2+)-regulated delivery of lysosomal

membranes to the cell surface is also involved in the phagocytic uptake of particles by macrophages (By similarity). Ca(2+)-triggered lysosomal exocytosis also plays a role in bone remodeling by regulating secretory pathways in osteoclasts and osteoblasts (By similarity). In case of infection, involved in participates cell invasion by Trypanosoma cruzi via Ca(2+)-triggered lysosomal exocytosis (PubMed:11342594, PubMed:15811535). Involved in cholesterol transport from lysosome to peroxisome by promoting membrane contacts between lysosomes and peroxisomes: probably acts by promoting vesicle fusion by binding phosphatidylinositol-4,5- bisphosphate on peroxisomal membranes (By similarity). Acts as a key mediator of synaptic facilitation, a process also named short-term synaptic potentiation: synaptic facilitation takes place at synapses with a low initial release probability and is caused by influx of Ca(2+) into the axon terminal after spike generation, increasing the release probability of neurotransmitters (By similarity). Probably mediates synaptic facilitation by directly increasing the probability of release (By similarity). May also contribute to synaptic facilitation by regulating synaptic vesicle replenishment, a process required to ensure that synaptic vesicles are ready for the arrival of the next action potential: SYT7 is required for synaptic vesicle replenishment by acting as a sensor for Ca(2+) and by forming a complex with calmodulin (By similarity). Also acts as a regulator of Ca(2+)- dependent insulin and glucagon secretion in beta-cells (By similarity). Triggers exocytosis by promoting fusion pore opening and fusion pore expansion in chromaffin cells (By similarity). Also regulates the secretion of some non-synaptic secretory granules of specialized cells (By similarity).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:Q62747}; Single-pass membrane protein. Presynaptic cell membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Lysosome membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Cytoplasmic vesicle, phagosome membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Peroxisome membrane {ECO:0000250|UniProtKB:Q9R0N7}; Single-pass membrane protein. Cytoplasmic vesicle, secretory vesicle membrane {ECO:0000250|UniProtKB:Q62747}; Single-pass membrane protein. Note=Localization to lysosomes is dependent on N- terminal palmitoylation and interaction with CD63 {ECO:0000250|UniProtKB:Q9R0N7}

Tissue Location

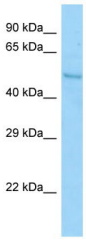
Expressed in a variety of adult and fetal tissues.

References

Cooper P.R.,et al.Genomics 49:419-429(1998).
Taylor T.D.,et al.Nature 440:497-500(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Images

WB Suggested Anti-SYT7 Antibody Titration: 1.0 µg/ml
Positive Control: ACHN Whole Cell



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.