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VAMP2 Rabbit mAb

Catalog # AP76237

Product Information

Application	WB, FC, IP
Primary Accession	P63027
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	12663

Additional Information

Gene ID	6844
Other Names	VAMP2
Dilution	WB~~1:1000-1:5000 FC~~1:50-1:100 IP~~1:100-1:200
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

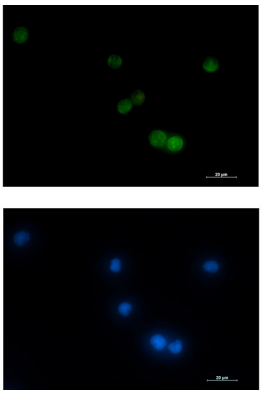
Name	VAMP2 (HGNC:12643)
Function	SNAREs (soluble N-ethylmaleimide-sensitive factor-attachment protein receptors) are essential proteins for intracellular membrane fusion. SNAREs localized on opposing membranes assemble to form a trans-SNARE complex, an extended, parallel four-helix bundle whose assembly releases energy that drives membrane fusion. The core SNARE complex typically consists of four alpha-helical domains, three from target membrane SNAREs (t-SNAREs) and one from a vesicle SNARE (v- SNARE) (PubMed:10036234, PubMed:30929742). VAMP2 is a v-SNARE assembling into a SNARE complex with the t-SNAREs SNAP25 and STX1A to mediate the fusion of synaptic vesicles with the presynaptic plasma membrane in neurotransmitter release (PubMed:30929742). Also functions in compensatory endocytosis for synaptic vesicle recycling (By similarity). In adipocytes, it is involved in the insulin-dependent exocytosis of GLUT4 storage vesicles (By similarity). Independently of its SNARE activity, it could modulate the gating characteristics of the delayed rectifier voltage-dependent potassium channel

	KCNB1 (By similarity).
Cellular Location	Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane; Single-pass type IV membrane protein. Cell membrane {ECO:0000250|UniProtKB:P63045}. Note=Colocalizes with PRKCZ and WDFY2 in intracellular vesicles (PubMed:17313651)
Tissue Location	Nervous system and skeletal muscle.

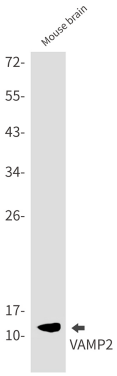
Background

The protein encoded by this gene is a member of the vesicle-associated membrane protein (VAMP)/synaptobrevin family. Synaptobrevins/VAMPs, syntaxins, and the 25-kD synaptosomal-associated protein SNAP25 are the main components of a protein complex involved in the docking and/or fusion of synaptic vesicles with the presynaptic membrane. This gene is thought to participate in neurotransmitter release at a step between docking and fusion. The protein forms a stable complex with syntaxin, synaptosomal-associated protein, 25 kD, and synaptotagmin. It also forms a distinct complex with synaptophysin. It is a likely candidate gene for familial infantile myasthenia (FIMG) because of its map location and because it encodes a synaptic vesicle protein of the type that has been implicated in the pathogenesis of FIMG.

Images

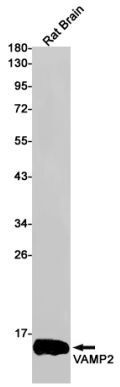


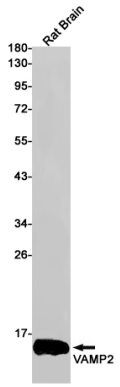
Immunocytochemistry analysis of VAMP2 (green) in Jurkat using VAMP2 antibody,and DAPI(blue).



Western blot analysis of VAMP2 in mouse brain lysates using VAMP2 antibody.

Western blot analysis of VAMP2 in rat Brain lysates using VAMP2 antibody





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