

#14811 Store at -20°C

**VAMP7 (D4D5J) Rabbit mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	25	Rabbit IgG	#P51809	6845

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity / Sensitivity**

VAMP7 (D4D5J) Rabbit mAb recognizes endogenous levels of total VAMP7 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala94 of human VAMP7 protein.

**Background**

Proteins in the soluble N-ethylmaleimide-sensitive factor attachment protein receptor (SNARE) complex are integral membrane proteins involved in vesicle transport and membrane fusion that pair vesicular SNAREs (v-SNAREs) with cognate target SNARE (t-SNARE) proteins (reviewed in 1,2). Vesicle-associated membrane protein 7 (VAMP7), or tetanus neurotoxin-insensitive VAMP (TI-VAMP), is a widely expressed v-SNARE involved in exocytosis of granules and synaptic vesicles in various cell types, membrane remodeling, neurite outgrowth, lysosomal secretion, and autophagosome maturation (3). Activity of VAMP7 can be regulated by c-Src-mediated tyrosine phosphorylation, which activates VAMP7-mediated exocytosis (4). VAMP7 activity can also be regulated through interaction with the guanine nucleotide exchange factor Varp (5,6). Several research studies indicate that VAMP7 plays an important role in neurite outgrowth as well as potential neurological activities, including anxiety (7-9). VAMP7 also appears to have a key role in T-cell activation by facilitating the recruitment of vesicular Lat to the immunological synapse (10). The VAMP7 protein interacts with ATG16L, a component of the ATG5-ATG12 complex, and regulates autophagosome maturation through homotypic fusion of ATG16L1 vesicles (11).

**Background References**

1. Jena, B.P. (2011) *Adv Exp Med Biol* 713, 13-32.
2. Kasai, H. et al. (2012) *Physiol Rev* 92, 1915-64.
3. Galli, T. et al. (1998) *Mol Biol Cell* 9, 1437-48.
4. Burgo, A. et al. (2013) *J Biol Chem* 288, 11960-72.
5. Burgo, A. et al. (2012) *Dev Cell* 23, 166-80.
6. Schäfer, I.B. et al. (2012) *Nat Struct Mol Biol* 19, 1300-9.
7. Martinez-Arca, S. et al. (2000) *J Cell Biol* 149, 889-900.
8. Alberts, P. et al. (2003) *Mol Biol Cell* 14, 4207-20.
9. Danglot, L. et al. (2012) *J Neurosci* 32, 1962-8.
10. Larghi, P. et al. (2013) *Nat Immunol* 14, 723-31.
11. Moreau, K. et al. (2011) *Cell* 146, 303-17.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key****WB:** Western Blotting**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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