

VAMP-1/2 (4E240): sc-58309

BACKGROUND

Syntaxins were originally thought to be docking proteins, but have more recently been categorized as anchoring proteins that anchor themselves to the cytoplasmic surfaces of cellular membranes. Syntaxins have been shown to bind to various proteins involved in exocytosis, including VAMPs (vesicle-associated membrane proteins), NSF (N-ethylmaleimide-sensitive factor), SNAP 25 (synaptosomal-associated protein of 25 kDa), SNAPs (soluble NSF attachment proteins) and Synaptotagmin. VAMPs, also designated synaptobrevins, including VAMP-1 and VAMP-2, and Synaptotagmin, a protein that may function as an inhibitor of exocytosis, are vesicular proteins. SNAPs, including α - and γ -SNAP, are cytoplasmic proteins that bind to a membrane receptor complex composed of VAMP, SNAP 25 and Syntaxin. SNAPs mediate the membrane binding of NSF, which is essential for membrane fusion reactions. An additional protein designated synaptophysin may regulate exocytosis by competing with SNAP 25 and syntaxins for VAMP binding.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: VAMP1 (human) mapping to 12p13.31, VAMP2 (human) mapping to 17p13.1; Vamp1 (mouse) mapping to 6 F3, Vamp2 (mouse) mapping to 11 B3.

SOURCE

VAMP-1/2 (4E240) is a mouse monoclonal antibody raised against synaptic vesicle containing fractions immunoprecipitated from brain homogenates of human origin.

PRODUCT

Each vial contains 200 μ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

VAMP-1/2 (4E240) is recommended for detection of VAMP-1 and VAMP-2 of mouse, rat, human, bovine, porcine and *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:1000-1:10000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

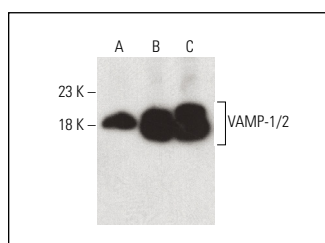
Molecular Weight of VAMP-1/2: 18 kDa.

Positive Controls: mouse brain extract: sc-2253, VAMP-2 (h2): 293T Lysate: sc-115139 or rat brain extract: sc-2392.

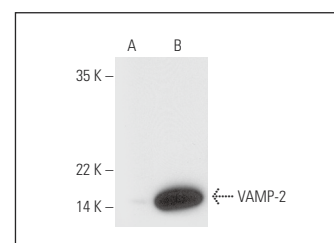
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml).

DATA



VAMP-1/2 (4E240): sc-58309. Western blot analysis of VAMP-1/2 expression in human brain (A), mouse brain (B) and rat brain (C) tissue extracts. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



VAMP-1/2 (4E240): sc-58309. Western blot analysis of VAMP-2 expression in non-transfected: sc-117752 (A) and human VAMP-2 transfected: sc-115139 (B) 293T whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.