

# Syntaxin 7 (A-1): sc-514017

## BACKGROUND

Correct vesicular transport is essential to the survival of eukaryotic cells. This process is determined by specific pairing of vesicle-associated SNAREs (v-SNAREs) with those on the target membrane (t-SNAREs). This complex then recruits soluble NSF attachment proteins (SNAPs) and N-ethylmaleimide-sensitive factor (NSF) to form the highly stable SNAP receptor (SNARE) complex. The formation of a SNARE complex pulls the vesicle and target membrane together and may provide the energy to drive fusion of the lipid bilayers. Syntaxins, a family of proteins involved in the fusion of synaptic vesicles with the plasma membrane, display broad tissue distribution and contain carboxy-terminal hydrophobic domains that direct themselves to their respective intracellular compartments. Syntaxin 7 binds  $\alpha$ -SNAP *in vitro* and forms a complex with Syntaxin 8, vti1b and VAMP-8 that functions in the fusion of late endosomes. *In vitro*, the abundant expression of Syntaxin 7 in B16 melanoma cells increases as they undergo melanogenesis. A SNARE complex between Syntaxin 7 and VAMP7 or VAMP8 may regulate the fusion events that eventually lead to melanogenesis.

## REFERENCES

1. Elferink, L.A., et al. 1993. A role for synaptotagmin (p65) in regulated exocytosis. *Cell* 72: 153-159.
2. Bennett, M.K., et al. 1993. The Syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
3. Yamaguchi, K. and Akagawa, K. 1994. Exocytosis relating proteins in the nervous system. *Neurosci. Res.* 20: 289-292.
4. Hayashi, T., et al. 1994. Synaptic vesicle membrane fusion complex: action of clostridial neurotoxins on assembly. *EMBO J.* 13: 5051-5061.

## CHROMOSOMAL LOCATION

Genetic locus: STX7 (human) mapping to 6q23.2; Stx7 (mouse) mapping to 10 A4.

## SOURCE

Syntaxin 7 (A-1) is a mouse monoclonal antibody raised against amino acids 88-160 mapping within an internal region of Syntaxin 7 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Syntaxin 7 (A-1) is available conjugated to agarose (sc-514017 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514017 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514017 PE), fluorescein (sc-514017 FITC), Alexa Fluor® 488 (sc-514017 AF488), Alexa Fluor® 546 (sc-514017 AF546), Alexa Fluor® 594 (sc-514017 AF594) or Alexa Fluor® 647 (sc-514017 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514017 AF680) or Alexa Fluor® 790 (sc-514017 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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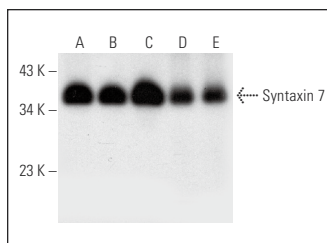
## APPLICATIONS

Syntaxin 7 (A-1) is recommended for detection of Syntaxin 7 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

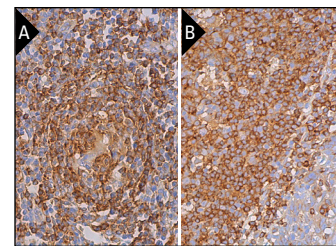
Suitable for use as control antibody for Syntaxin 7 siRNA (h): sc-41334, Syntaxin 7 siRNA (m): sc-41335, Syntaxin 7 shRNA Plasmid (h): sc-41334-SH, Syntaxin 7 shRNA Plasmid (m): sc-41335-SH, Syntaxin 7 shRNA (h) Lentiviral Particles: sc-41334-V and Syntaxin 7 shRNA (m) Lentiviral Particles: sc-41335-V.

Positive Controls: Hep G2 cell lysate: sc-2227, MDA-MB-231 cell lysate: sc-2232 or human heart extract: sc-363763.

## DATA



Syntaxin 7 (A-1): sc-514017. Western blot analysis of Syntaxin 7 expression in JAR (A), Hep G2 (B) and MDA-MB-231 (C) whole cell lysates and human kidney (D) and human heart (E) tissue extracts.



Syntaxin 7 (A-1): sc-514017. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node (A) and human tonsil (B) tissue showing cytoplasmic and membrane staining of cells in germinal center and cells in non-germinal center.

## SELECT PRODUCT CITATIONS

1. Bilkei-Gorzo, O., et al. 2022. The E3 ubiquitin ligase RNF115 regulates phagosome maturation and host response to bacterial infection. *EMBO J.* 41: e108970.
2. Parveen, S., et al. 2022. Syntaxin 7 contributes to breast cancer cell invasion by promoting invadopodia formation. *J. Cell Sci.* 135: jcs259576.

## 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](http://www.scbt.com) for detailed protocols and support products.