

# Syntaxin 3 (D-5): sc-393518

## 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 3 localizes to the apical plasma membrane and is involved in membrane fusion of apical trafficking pathways. Syntaxin 3 is a key factor in the growth of neurites, and it also functions as a direct target for arachidonic acid. Human Syntaxin 3 has two forms: Syntaxin 3A and 3B, while the mouse version has four forms: 3A, 3B, 3C, and 3D.

## REFERENCES

- Bennett, M.K., et al. 1993. The Syntaxin family of vesicular transport receptors. *Cell* 74: 863-873.
- Nagahama, M., et al. 1996. A v-SNARE implicated in intra-Golgi transport. *J. Cell Biol.* 133: 507-516.
- Lowe, S.L., et al. 1997. A SNARE involved in protein transport through the Golgi apparatus. *Nature* 389: 881-884.

## CHROMOSOMAL LOCATION

Genetic locus: STX3 (human) mapping to 11q12.1; Stx3 (mouse) mapping to 19 A.

## SOURCE

Syntaxin 3 (D-5) is a mouse monoclonal antibody raised against amino acids 1-33 mapping at the N-terminus of Syntaxin 3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Syntaxin 3 (D-5) is available conjugated to agarose (sc-393518 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393518 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393518 PE), fluorescein (sc-393518 FITC), Alexa Fluor® 488 (sc-393518 AF488), Alexa Fluor® 546 (sc-393518 AF546), Alexa Fluor® 594 (sc-393518 AF594) or Alexa Fluor® 647 (sc-393518 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393518 AF680) or Alexa Fluor® 790 (sc-393518 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

Syntaxin 3 (D-5) is recommended for detection of Syntaxin 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (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 3 siRNA (h): sc-41328, Syntaxin 3 siRNA (m): sc-41329, Syntaxin 3 shRNA Plasmid (h): sc-41328-SH, Syntaxin 3 shRNA Plasmid (m): sc-41329-SH, Syntaxin 3 shRNA (h) Lentiviral Particles: sc-41328-V and Syntaxin 3 shRNA (m) Lentiviral Particles: sc-41329-V.

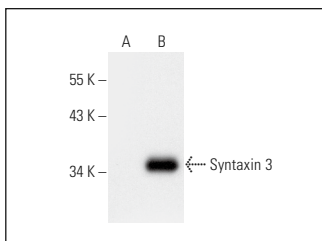
Molecular Weight of Syntaxin 3: 37 kDa.

Positive Controls: Syntaxin 3 (m): 293T Lysate: sc-123879.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Syntaxin 3 (D-5): sc-393518. Western blot analysis of Syntaxin 3 expression in non-transfected: sc-117752 (A) and mouse Syntaxin 3 transfected: sc-123879 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Ganesan, R., et al. 2017. *Salmonella typhimurium* disrupts Sirt1/AMPK checkpoint control of mTOR to impair autophagy. *PLoS Pathog.* 13: e1006227.
- Brasher, M.I., et al. 2017. Interaction of Munc18c and Syntaxin 4 facilitates invadopodium formation and extracellular matrix invasion of tumour cells. *J. Biol. Chem.* 292: 16199-16210.

## RESEARCH USE

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