

# Unc18-3 (H-7): sc-373813

## BACKGROUND

Unc18-1, -2 and -3 (syntaxin binding proteins 1-3, STXBP1-3, UNC18-a-c, MUNC18-1-3) are chaperone molecules that block syntaxin interactions with cognate SNARE (soluble NSF attachment protein (SNAP) receptor) proteins and regulate exocytosis. Unc18-1-3 mRNA is present in RBL-2H3 mast cells, mouse bone marrow derived mast cells (BMMC) and platelets. Unc18-1 Ser 313 is a protein kinase C phosphorylation site and Thr 574 is a cyclin-dependent kinase 5 phosphorylation site that regulates Unc18-1/syntaxin1A interactions. Unc18-1 is phosphorylated on Ser 313 in response to phorbol ester treatment in adrenal chromaffin cells. Unc18-2 colocalizes with syntaxin 3 at the apical plasma membrane of intestinal, proximal tubule and collecting duct epithelial cells.

## REFERENCES

- Schraw, T.D., et al. 2003. A role for Sec1/Munc18 proteins in platelet exocytosis. *Biochem. J.* 374: 207-217.
- Barclay, J.W., et al. 2003. Phosphorylation of Munc18 by protein kinase C regulates the kinetics of exocytosis. *J. Biol. Chem.* 278: 10538-10545.
- Gaisano, H.Y., et al. 2004. Alcoholic chronic pancreatitis involves displacement of Munc18c from the pancreatic acinar basal membrane surface. *Pancreas* 28: 395-400.
- Graham, M.E., et al. 2004. Syntaxin/Munc18 interactions in the late events during vesicle fusion and release in exocytosis. *J. Biol. Chem.* 279: 32751-32760.

## CHROMOSOMAL LOCATION

Genetic locus: STXBP3 (human) mapping to 1p13.3; Stxbp3 (mouse) mapping to 3 F3.

## SOURCE

Unc18-3 (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 501-533 within an internal region of Unc18-3 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.

Unc18-3 (H-7) is available conjugated to agarose (sc-373813 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373813 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373813 PE), fluorescein (sc-373813 FITC), Alexa Fluor® 488 (sc-373813 AF488), Alexa Fluor® 546 (sc-373813 AF546), Alexa Fluor® 594 (sc-373813 AF594) or Alexa Fluor® 647 (sc-373813 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373813 AF680) or Alexa Fluor® 790 (sc-373813 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373813 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

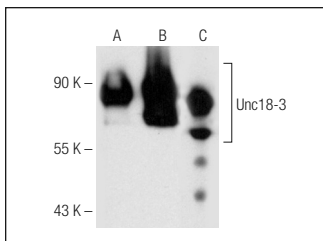
Unc18-3 (H-7) is recommended for detection of Unc18-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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).

Unc18-3 (H-7) is also recommended for detection of Unc18-3 in additional species, including porcine.

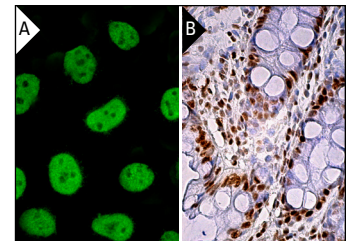
Suitable for use as control antibody for Unc18-3 siRNA (h): sc-42312, Unc18-3 siRNA (m): sc-42313, Unc18-3 shRNA Plasmid (h): sc-42312-SH, Unc18-3 shRNA Plasmid (m): sc-42313-SH, Unc18-3 shRNA (h) Lentiviral Particles: sc-42312-V and Unc18-3 shRNA (m) Lentiviral Particles: sc-42313-V.

Positive Controls: Unc18-3 (h): 293T Lysate: sc-116071 or MEG-01 whole cell lysate: sc-2283.

## DATA



Unc18-3 (H-7): sc-373813. Western blot analysis of Unc18-3 expression in non-transfected 293T: sc-117752 (A), human Unc18-3 transfected 293T: sc-116071 (B) and MEG-01 (C) whole cell lysates.



Unc18-3 (H-7): sc-373813. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Brasher, M.I., et al. 2017. Interaction of Munc18c and syntaxin4 facilitates invadopodium formation and extracellular matrix invasion of tumour cells. *J. Biol. Chem.* 292: 16199-16210.

## 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.