

# Unc18-1/2 (D-1): sc-133169

## BACKGROUND

Unc18-1, 2 and 3 (also known as Syntaxin binding proteins 1-3, STXBP1-3, UNC18-a-c and Munc18-1-3) are chaperone molecules that block Syntaxin interactions with cognate SNARE (soluble NSF attachment protein (SNAP) receptors) 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. Thr 574 is a cyclin-dependent kinase 5 phosphorylation site that regulates Unc18-1/Syntaxin 1A interactions. Unc18-1 is phosphorylated on Ser 313 in response to phorbol ester treatment in adrenal chromaffin cells. Unc18-2 co-localizes 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.
- Liu, J., et al. 2004. Fluorescence resonance energy transfer reports properties of Syntaxin 1A interaction with Munc18-1 *in vivo*. *J. Biol. Chem.* 279: 55924-55936.

## CHROMOSOMAL LOCATION

Genetic locus: STXBP1 (human) mapping to 9q34.11, STXBP2 (human) mapping to 19p13.2; Stxbp1 (mouse) mapping to 2 B, Stxbp2 (mouse) mapping to 8 A1.1.

## SOURCE

Unc18-1/2 (D-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Unc18-1 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.

Unc18-1/2 (D-1) is available conjugated to agarose (sc-133169 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133169 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133169 PE), fluorescein (sc-133169 FITC), Alexa Fluor<sup>®</sup> 488 (sc-133169 AF488), Alexa Fluor<sup>®</sup> 546 (sc-133169 AF546), Alexa Fluor<sup>®</sup> 594 (sc-133169 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-133169 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-133169 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-133169 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Unc18-1/2 (D-1) is recommended for detection of Unc18-1 and Unc18-2 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).

Unc18-1/2 (D-1) is also recommended for detection of Unc18-1 and Unc18-2 in additional species, including bovine.

Molecular Weight of Unc18-1: 70 kDa.

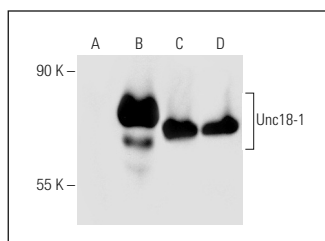
Molecular Weight of Unc18-2: 67 kDa.

Positive Controls: Unc18-1 (m): 293T Lysate: sc-127749, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

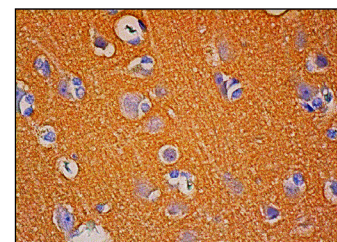
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Unc18-1/2 (D-1): sc-133169. Western blot analysis of Unc18-1 expression in non-transfected: sc-117752 (A) and mouse Unc18-1 transfected: sc-127749 (B); 293T whole cell lysates and mouse brain (C) and rat brain (D) tissue extracts.



Unc18-1/2 (D-1): sc-133169. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing neuropil staining.

## 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.