

p-Unc18-1 (Ser 313)-R: sc-28459-R

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) 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 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 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: 279-284.
- Gladysheva, S.E., et al. 2004. Regulation of syntaxin1A-munc18 complex for SNARE pairing in HEK293 cells. *J. Physiol.* 558: 857-871.
- Fu, J., et al. 2005. Protease-activated receptor-1 activation of endothelial cells induces protein kinase C α -dependent phosphorylation of syntaxin 4 and Munc18c: role in signaling p-selectin expression. *J. Biol. Chem.* 280: 3178-3184.

CHROMOSOMAL LOCATION

Genetic locus: STXBP1 (human) mapping to 9q34.1; Stxbp1 (mouse) mapping to 2 B.

SOURCE

p-Unc18-1 (Ser 313)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 313 of Unc18-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-28459 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

p-Unc18-1 (Ser 313)-R is recommended for detection of Ser 313 phosphorylated Unc18-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

p-Unc18-1 (Ser 313)-R is also recommended for detection of correspondingly phosphorylated Ser on Unc18-1 in additional species, including equine, bovine, porcine and avian.

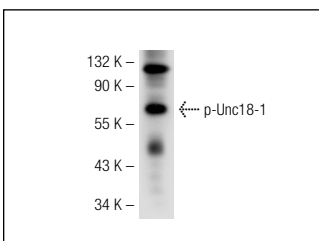
Suitable for use as control antibody for Unc18-1 siRNA (h): sc-42308, Unc18-1 siRNA (m): sc-42309, Unc18-1 shRNA Plasmid (h): sc-42308-SH, Unc18-1 shRNA Plasmid (m): sc-42309-SH, Unc18-1 shRNA (h) Lentiviral Particles: sc-42308-V and Unc18-1 shRNA (m) Lentiviral Particles: sc-42309-V.

Molecular Weight of p-Unc18-1: 68 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



p-Unc18-1 (Ser 313)-R: sc-28459-R. Western blot analysis of Unc18-1 phosphorylation in IMR-32 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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