SANTA CRUZ BIOTECHNOLOGY, INC.

NSF (E-6): sc-74458



BACKGROUND

Syntaxins were originally thought to be docking proteins, but have more recently been categorized as anchoring proteins that anchor themselves to the cytoplasmic surfaces of cellular membranes. Syntaxins have been shown to bind to various proteins involved in exocytosis, including VAMPs (vesicle-associated membrane proteins), NSF (N-ethylmaleimide-sensitive factor), SNAP 25 (synaptosomal-associated protein of 25 kDa), SNAPs (soluble NSF attachment proteins) and synaptotagmin. VAMPs, also designated synaptobrevins, including VAMP-1 and VAMP-2, and synaptotagmin, a protein that may function as an inhibitor of exocytosis, are vesicular proteins. SNAPs, including α - and γ -SNAP, are cytoplasmic proteins that bind to a membrane receptor complex composed of VAMP, SNAP 25 and syntaxin. SNAPs mediate the membrane binding of NSF, which is essential for membrane fusion reactions.

REFERENCES

- 1. Elferink, L.A., et al. 1993. A role for Synapto-tagmin (p65) in regulated exocytosis. Cell 72: 153-159.
- Bennett, M.K., et al. 1993. The Syntaxin family of vesicular transport receptors. Cell 74: 863-873.

CHROMOSOMAL LOCATION

Genetic locus: NSF (human) mapping to 17q21.31; Nsf (mouse) mapping to 11 E1.

SOURCE

NSF (E-6) is a mouse monoclonal antibody raised against amino acids 1-300 mapping near the N-terminus of NSF of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NSF (E-6) is recommended for detection of NSF 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 NSF siRNA (h): sc-36101, NSF siRNA (m): sc-36102, NSF siRNA (r): sc-156016, NSF shRNA Plasmid (h): sc-36101-SH, NSF shRNA Plasmid (m): sc-36102-SH, NSF shRNA Plasmid (r): sc-156016-SH, NSF shRNA (h) Lentiviral Particles: sc-36101-V, NSF shRNA (m) Lentiviral Particles: sc-36102-V and NSF shRNA (r) Lentiviral Particles: sc-156016-V.

Molecular Weight of NSF: 76 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, SK-N-SH cell lysate: sc-2410 or SH-SY5Y cell lysate: sc-3812.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG K BP-HRP: sc-516102 or m-IgG K 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-IgG K BP-FITC: sc-516140 or m-IgG K 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





NSF (E-6): sc-74458. Western blot analysis of NSF expression in SK-N-SH (\bf{A}), SH-SY5Y (\bf{B}) and KNRK (\bf{C}) whole cell lysates.

NSF (E-6): sc-74458. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization

SELECT PRODUCT CITATIONS

- Perdomo, D., et al. 2015. Cellular and proteomics analysis of the endomembrane system from the unicellular *Entamoeba histolytica*. J. Proteomics 112: 125-140.
- 2. Laperle, A., et al. 2015. α -5 laminin synthesized by human pluripotent stem cells promotes self-renewal. Stem Cell Reports 5: 195-206.
- 3. Plumel, M., et al. 2019. Circadian analysis of the mouse cerebellum proteome. Int. J. Mol. Sci. 20: 1852.

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 for detailed protocols and support products.