SANTA CRUZ BIOTECHNOLOGY, INC.

Stomatin (E-6): sc-376920

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Stomatin is an integral membrane protein found in lipid/protein-rich microdomains of almost all human tissues. It was named after the rare human disease haemolytic anaemia hereditary stomatocytosis. Stomatin is implicated in signal transduction and cell communication, and it may regulate cation movement through ion channels and transporters. Absence of Stomatin may cause Na^+ and K^+ ions to leak into and from erythrocytes. A second function of Stomatin may be to act as a cytoskeletal anchor. Stomatin is a major lipid-raft component of erythrocytes and epithelial cells, and is also an abundant platelet protein. It contains a single hydrophobic domain, close to the N-terminus, and a phosphorylation site.

REFERENCES

1. Stewart, G.W. 1997. Stomatin. Int. J. Biochem. Cell Biol. 29: 271-274.
2. Snyers, L., et al. 1999. Association of Stomatin with lipid-protein complexes in the plasma membrane and the endocytic compartment. Eur. J. Cell Biol. 78: 802-812.
3. Salzer, U. and Prohaska, R. 2001. Stomatin, Flotillin-1, and Flotillin-2 are major integral proteins of erythrocyte lipid rafts. Blood 97: 1141-1143.
4. Mairhofer, M., et al. 2002. Stomatin is a major lipid-raft component of platelet a granules. Blood 100: 897-904.

CHROMOSOMAL LOCATION

Genetic locus: STOM (human) mapping to 9q33.2.

SOURCE

Stomatin (E-6) is a mouse monoclonal antibody raised against amino acids 1-45 mapping at the N-terminus of Stomatin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Stomatin (E-6) is recommended for detection of Stomatin of 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).

Suitable for use as control antibody for Stomatin siRNA (h): sc-61620, Stomatin shRNA Plasmid (h): sc-61620-SH and Stomatin shRNA (h) Lentiviral Particles: sc-61620-V.

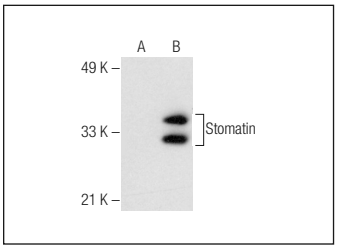
Molecular Weight of Stomatin: 31 kDa.

Positive Controls: Stomatin (h3): 293T Lysate: sc-159688, MEG-01 cell lysate: sc-2283 or Hep G2 cell lysate: sc-2227.

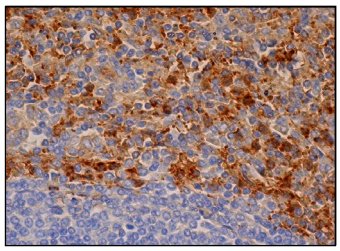
RECOMMENDED SUPPORT REAGENTS

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. 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



Stomatin (E-6): sc-376920. Western blot analysis of Stomatin expression in non-transfected: sc-117752 (**A**) and human Stomatin transfected: sc-159688 (**B**) 293T whole cell lysates.



Stomatin (E-6): sc-376920. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red pulp.

SELECT PRODUCT CITATIONS

1. Chen, T.W., et al. 2016. Over-expression of Stomatin causes syncytium formation in nonfusogenic JEG-3 choriocarcinoma placental cells. Cell Biol. Int. 40: 926-933.
2. Wu, S.C., et al. 2022. Stomatin modulates adipogenesis through the ERK pathway and regulates fatty acid uptake and lipid droplet growth. Nat. Commun. 13: 4174.

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.