SANTA CRUZ BIOTECHNOLOGY, INC.

Stomatin (M-14): sc-48308

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 α granules. Blood 100: 897-904.
5. Umlauf, E., et al. 2004. Association of Stomatin with lipid bodies. J. Biol. Chem. 279: 23699-23709.
6. Price, M.P., et al. 2004. Stomatin modulates gating of acid-sensing ion channels. J. Biol. Chem. 279: 53886-53891.
7. Yu, T.T., et al. 2005. Differentially expressed transcripts from phenotypically identified olfactory sensory neurons. J. Comp. Neurol. 483: 251-62.
8. Umlauf, E., et al. 2006. Characterization of the Stomatin domain involved in homo-oligomerization and lipid raft association. J. Biol. Chem. 281: 23349-23356.

CHROMOSOMAL LOCATION

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

SOURCE

Stomatin (M-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Stomatin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-48308 P, (100 µg 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

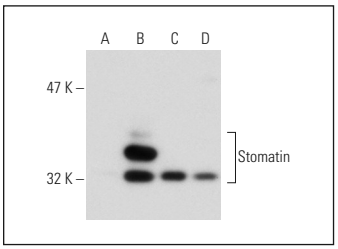
Stomatin (M-14) is recommended for detection of Stomatin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

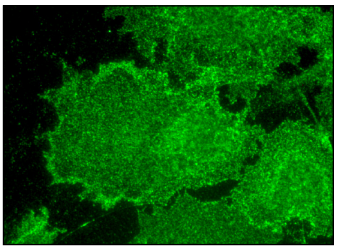
Molecular Weight of Stomatin: 31 kDa.

Positive Controls: Stomatin (h3): 293T Lysate: sc-159688, HeLa whole cell lysate: sc-2200 or MEG-01 cell lysate: sc-2283.

DATA



Stomatin (M-14): sc-48308. Western blot analysis of Stomatin expression in non-transfected 293T: sc-117752 (**A**), human Stomatin transfected 293T: sc-159688 (**B**), MEG-01 (**C**) and HeLa (**D**) whole cell lysates.



Stomatin (M-14): sc-48308. Immunofluorescence staining of formalin-fixed HepG2 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Crepaldi Domingues, C., et al. 2009. Resistance of human erythrocyte membranes to Triton X-100 and C12E8. J. Membr. Biol. 227: 39-48.
2. Domingues, C.C., et al. 2010. Effect of cholesterol depletion and temperature on the isolation of detergent-resistant membranes from human erythrocytes. J. Membr. Biol. 234: 195-205.
3. Ciana, A., et al. 2011. On the association of lipid rafts to the spectrin skeleton in human erythrocytes. Biochim. Biophys. Acta 1808: 183-190.

RESEARCH USE

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