SANTA CRUZ BIOTECHNOLOGY, INC.

Stomatin (E-5): sc-376869

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.

CHROMOSOMAL LOCATION

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

SOURCE

Stomatin (E-5) 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_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Stomatin (E-5) is available conjugated to agarose (sc-376869 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376869 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376869 PE), fluorescein (sc-376869 FITC), Alexa Fluor® 488 (sc-376869 AF488), Alexa Fluor® 546 (sc-376869 AF546), Alexa Fluor® 594 (sc-376869 AF594) or Alexa Fluor® 647 (sc-376869 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376869 AF680) or Alexa Fluor® 790 (sc-376869 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Stomatin (E-5) 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, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

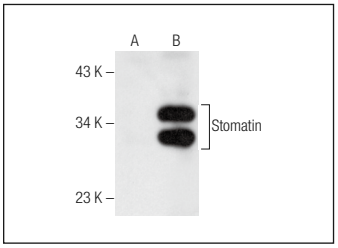
RESEARCH USE

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

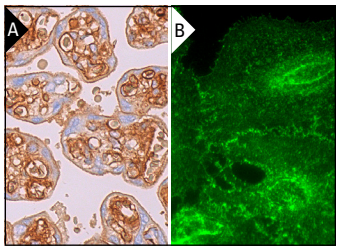
STORAGE

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

DATA



Stomatin (E-5): sc-376869. 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-5): sc-376869. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic and membrane staining of trophoblastic cells and endothelial cells (**A**). Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**B**).

SELECT PRODUCT CITATIONS

1. Usman, W.M., et al. 2018. Efficient RNA drug delivery using red blood cell extracellular vesicles. Nat. Commun. 9: 2359.
2. Bolotta, A., et al. 2018. Oxidative stress in autistic children Alters erythrocyte shape in the absence of quantitative protein alterations and of loss of membrane phospholipid asymmetry. Oxid. Med. Cell. Longev. 2018: 6430601.
3. Hoshino, A., et al. 2020. Extracellular vesicle and particle biomarkers define multiple human cancers. Cell 182: 1044-1061.e18.
4. Vimonpatranon, S., et al. 2022. Extracellular vesicles derived from early and late stage *Plasmodium falciparum*-infected red blood cells contain invasion-associated proteins. J. Clin. Med. 11: 4250.
5. Rougé, S., et al. 2022. Mechanosensitive pannexin 1 activity is modulated by Stomatin in human red blood cells. Int. J. Mol. Sci. 23: 9401.
6. Pham, T.T., et al. 2023. Endosomal escape of nucleic acids from extracellular vesicles mediates functional therapeutic delivery. Pharmacol. Res. 188: 106665.
7. Khowawisetsut, L., et al. 2023. Differential effect of extracellular vesicles derived from *Plasmodium falciparum*-infected red blood cells on monocyte polarization. Int. J. Mol. Sci. 24: 2631.
8. Vetter, L., et al. 2023. Starvation induces changes in abundance and small RNA cargo of extracellular vesicles released from *Plasmodium falciparum* infected red blood cells. Sci Rep. 13: 18423.

PROTOCOLS

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