

S-100A10 (4E7E10): sc-81153

BACKGROUND

The S-100 family of calcium-activated proteins interact with a range of target proteins to modulate biological signaling pathways. Numerous cancer cell lines overexpress the plasminogen receptor S-100A10 on the extracellular cell surface, where it forms a heterotetrameric complex with Annexin II, though this association is not required for plasma membrane localization or binding and activation of plasminogen. Additionally, S-100A10 acts as a cellular chaperone for hepatitis B (Hep B) virus polymerase. Hep B virus polymerase normally localizes to the cytoplasm only, though in the presence of S-100A10 a portion relocates to the nucleus, implying a role for S-100A10 and intracellular calcium in the process of viral replication.

CHROMOSOMAL LOCATION

Genetic locus: S100A10 (human) mapping to 1q21.3.

SOURCE

S-100A10 (4E7E10) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 2-97 of S-100A10 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

S-100A10 (4E7E10) is available conjugated to agarose (sc-81153 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-81153 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-81153 PE), fluorescein (sc-81153 FITC), Alexa Fluor® 488 (sc-81153 AF488), Alexa Fluor® 546 (sc-81153 AF546), Alexa Fluor® 594 (sc-81153 AF594) or Alexa Fluor® 647 (sc-81153 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-81153 AF680) or Alexa Fluor® 790 (sc-81153 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

S-100A10 (4E7E10) is recommended for detection of S-100A10 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for S-100A10 siRNA (h): sc-44084, S-100A10 shRNA Plasmid (h): sc-44084-SH and S-100A10 shRNA (h) Lentiviral Particles: sc-44084-V.

Molecular Weight of S-100A10: 11 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Caco-2 cell lysate: sc-2262 or A-431 whole cell lysate: sc-2201.

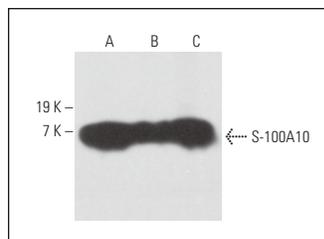
STORAGE

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

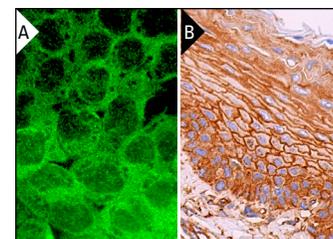
RESEARCH USE

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

DATA



S-100A10 (4E7E10): sc-81153. Western blot analysis of S-100A10 expression in A-431 (A), MCF7 (B) and Caco-2 (C) whole cell lysates.



S-100A10 (4E7E10): sc-81153. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane and cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing membrane staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

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- Dziduszko, A. and Ozbun, M.A. 2013. Annexin A2 and S-100A10 regulate human papillomavirus type 16 entry and intracellular trafficking in human keratinocytes. *J. Virol.* 87: 7502-7515.
- Madureira, P.A., et al. 2016. Cell surface protease activation during RAS transformation: critical role of the plasminogen receptor, S-100A10. *Oncotarget* 7: 47720-47737.
- Huang, D., et al. 2017. Annexin A2-S100A10 heterotetramer is upregulated by PML/RAR α fusion protein and promotes plasminogen-dependent fibrinolysis and matrix invasion in acute promyelocytic leukemia. *Front. Med.* 11: 410-422.
- Hartmann, D., et al. 2018. Immunofluorescence and confocal microscopy for *ex-vivo* diagnosis of melanocytic and non-melanocytic skin tumors: a pilot study. *J. Biophotonics*. E-published.
- Xiao, Y., et al. 2019. S-100A10 is a critical mediator of GAS6/AXL-induced angiogenesis in renal cell carcinoma. *Cancer Res.* 79: 5758-5768.
- Ma, J., et al. 2021. Single-cell transcriptomic analysis of endometriosis provides insights into fibroblast fates and immune cell heterogeneity. *Cell Biosci.* 11: 125.
- Gioelli, N., et al. 2022. Neuropilin 1 and its inhibitory ligand mini-tryptophanyl-tRNA synthetase inversely regulate VE-cadherin turnover and vascular permeability. *Nat. Commun.* 13: 4188.

PROTOCOLS

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

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