

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.

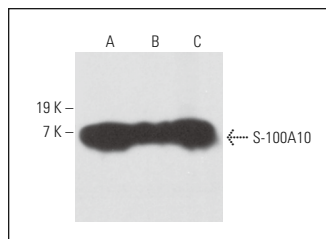
STORAGE

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

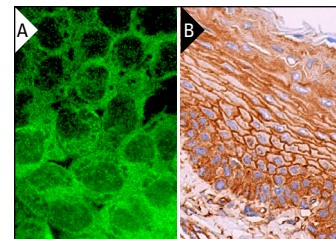
RESEARCH USE

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

1. Zhao, W., et al. 2011. Suppression of lung cancer cell invasion and metastasis by connexin43 involves the secretion of follistatin-like 1 mediated via histone acetylation. *Int. J. Biochem. Cell Biol.* 43: 1459-1468.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. Ma, J., et al. 2021. Single-cell transcriptomic analysis of endometriosis provides insights into fibroblast fates and immune cell heterogeneity. *Cell Biosci.* 11: 125.
8. 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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA