

S-100A14 (5): sc-101506

BACKGROUND

The S-100 protein family consists of a group of calcium-binding proteins, which exhibit cell and tissue-specific expression. The expression levels of its members differ in various pathological conditions. The extracellular functions of the S-100 family may include the ability to enhance neurite outgrowth, involvement in inflammation, and motility of tumor cells. S100 calcium binding protein A14 (S-100A14), a member of the S-100 protein family, is expressed highest in the colon and moderately in the thymus, kidney, liver, small intestine, and lung. Low expression of S-100A14 is observed in the heart, while no detection is seen in brain, skeletal muscle, spleen, placenta and peripheral blood leukocytes. S-100A14 is a 104-amino acid protein that is 68% homologous to the S-100A13 protein. It contains two EF-hand Ca²⁺-binding domains, a myristoylation motif, a glycosylation site, and several potential protein kinase phosphorylation sites.

REFERENCES

1. Pietas, A., et al. 2002. Molecular cloning and characterization of the human S100A14 gene encoding a novel member of the S100 family. *Genomics* 79: 513-522.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607986. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Adam, P.J., et al. 2003. Comprehensive proteomic analysis of breast cancer cell membranes reveals unique proteins with potential roles in clinical cancer. *J. Biol Chem.* 278: 6482-6489.
4. Ji, J., et al. 2004. Differential expression of S100 gene family in human esophageal squamous cell carcinoma. *J. Cancer. Res. Clin. Oncol.* 130: 480-486.
5. Smirnov, D.A., et al. 2005. Global gene expression profiling of circulating tumor cells. *Cancer. Res.* 65: 4993-4997.
6. Zimmer, D.B., et al. 2005. S100-mediated signal transduction in the nervous system and neurological diseases. *Cell. Mol. Biol.* 51: 201-214.

CHROMOSOMAL LOCATION

Genetic locus: S100A14 (human) mapping to 1q21.3.

SOURCE

S-100A14 (5) is a mouse monoclonal antibody raised against recombinant S-100A14 of human origin.

STORAGE

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

PROTOCOLS

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

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-100A14 (5) is available conjugated to agarose (sc-101506 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101506 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101506 PE), fluorescein (sc-101506 FITC), Alexa Fluor® 488 (sc-101506 AF488), Alexa Fluor® 546 (sc-101506 AF546), Alexa Fluor® 594 (sc-101506 AF594) or Alexa Fluor® 647 (sc-101506 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-101506 AF680) or Alexa Fluor® 790 (sc-101506 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

S-100A14 (5) is recommended for detection of S-100A14 of human origin by 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 S-100A14 siRNA (h): sc-61486, S-100A14 shRNA Plasmid (h): sc-61486-SH and S-100A14 shRNA (h) Lentiviral Particles: sc-61486-V.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. 2) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

RESEARCH USE

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