

S-100 (S1-61): sc-53438

BACKGROUND

The family of EF-hand type Ca^{2+} -binding proteins includes calbindin (previously designated vitamin D-dependent Ca^{2+} -binding protein), S-100 α and β , calgranulins A (also designated MRP8), B (also designated MRP14) and C (S-100 like proteins), and the parvalbumin family members, including parvalbumin α and parvalbumin β , also designated oncomodulin (OCM). Calbindin, S-100 proteins and parvalbumin proteins are each expressed in neural tissues. In addition, S-100 α and β are present in a variety of other tissues, and calbindin is present in intestine and kidney. Parvalbumin α is also found in fast-contracting/relaxing skeletal muscle fibers and parvalbumin β is found in many tumor tissues as well as in the organ of Corti. Calbindin, S-100 proteins and parvalbumins have all been detected in leydig cells and the testis. These proteins are thought to play a role in hormone production and spermatogenesis. Calgranulin is expressed in macrophages and epithelial cells.

CHROMOSOMAL LOCATION

Genetic locus: S100A1 (human) mapping to 1q21.3; S100a1 (mouse) mapping to 3 F1.

SOURCE

S-100 (S1-61) is a mouse monoclonal antibody raised against S-100 protein 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-100 (S1-61) is available conjugated to agarose (sc-53438 AC), 500 μg /0.25 ml agarose in 1 ml, for IP; to HRP (sc-53438 HRP), 200 $\mu\text{g}/\text{ml}$, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53438 PE), fluorescein (sc-53438 FITC), Alexa Fluor[®] 488 (sc-53438 AF488), Alexa Fluor[®] 546 (sc-53438 AF546), Alexa Fluor[®] 594 (sc-53438 AF594) or Alexa Fluor[®] 647 (sc-53438 AF647), 200 $\mu\text{g}/\text{ml}$, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53438 AF680) or Alexa Fluor[®] 790 (sc-53438 AF790), 200 $\mu\text{g}/\text{ml}$, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

S-100 (S1-61) is recommended for detection of S-100 of mouse, rat and 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of S-100 dimer: 21 kDa.

Molecular Weight of S-100 α chain: 11 kDa.

Molecular Weight of S-100 β chain: 10 kDa.

Positive Controls: human skin extract: sc-363777.

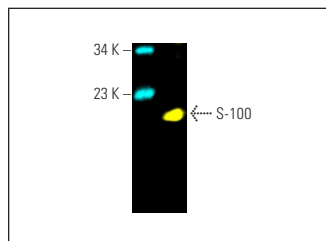
RESEARCH USE

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

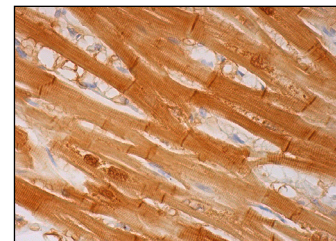
STORAGE

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

DATA



S-100 (S1-61) Alexa Fluor[®] 488: sc-53438 AF488. Direct fluorescent western blot analysis of S-100 expression in human skin tissue extract. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker[™] MW Tag-Alexa Fluor[®] 647: sc-516791.



S-100 (S1-61): sc-53438. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and membrane staining of myocytes.

SELECT PRODUCT CITATIONS

- Bonaros, N., et al. 2008. CCR3- and CXCR4-mediated interactions regulate migration of CD34⁺ human bone marrow progenitors to ischemic myocardium and subsequent tissue repair. *J. Thorac. Cardiovasc. Surg.* 136: 1044-1053.
- Bonaros, N., et al. 2011. Downregulation of the CXC chemokine receptor 4/stromal cell-derived factor 1 pathway enhances myocardial neovascularization, cardiomyocyte survival, and functional recovery after myocardial infarction. *J. Thorac. Cardiovasc. Surg.* 142: 687-696, 696.e1-2.
- Yang, G.Z., et al. 2013. Is mammary not otherwise specified-type sarcoma with CD10 expression a distinct entity? A rare case report with immunohistochemical and ultrastructural study. *Diagn. Pathol.* 8: 14.
- Cai, Y.L., et al. 2016. IgG₄-related inflammatory pseudotumor of the kidney mimicking renal cell carcinoma: a case report. *Oncol. Lett.* 11: 3438-3440.
- Koeppen, A.H., et al. 2017. Friedreich ataxia: developmental failure of the dorsal root entry zone. *J. Neuropathol. Exp. Neurol.* 76: 969-977.
- Zeng, Z., et al. 2018. Cancer-derived exosomal miR-25-3p promotes pre-metastatic niche formation by inducing vascular permeability and angiogenesis. *Nat. Commun.* 9: 5395.
- Sferra, R., et al. 2019. Neurovascular alterations of muscularis propria in the human anterior vaginal wall in pelvic organ prolapse. *J. Anat.* 235: 281-288.
- Sanli, E., et al. 2019. Effect of local and systemic dimethylsulfoxide on peripheral nerve repair: a controlled randomized experimental study. *J. Invest. Surg.* 25: 1-12.

PROTOCOLS

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

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