SANTA CRUZ BIOTECHNOLOGY, INC.

S-100P (B-10): sc-374547

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

S-100 proteins are small dimeric members of the EF-Hand superfamily that participate in moderating intracellular calcium signals by binding to and regulating specific proteins in a calcium-dependent manner. S-100P is a survival factor that is associated with different types of tumors and can bind and regulate effector proteins. R1881, a synthetic androgen, regulates S-100P expression. S-100P interacts with a receptor for advanced glycation end products (RAGE) and activates it, thereby increasing the rates of cell growth, division, migration and invasion. This suggests that S-100P acts in an autocrine manner through RAGE to trigger cell proliferation and survival. S-100P may also positively affect anchorage-independent growth to improve tumor formation. S-100P monomers strongly interact with one another, but not with other S-100 polypeptides, suggesting that homodimer formation is necessary for S-100P to function. The S-100P dimers are then stabilized by hydrophobic contacts.

REFERENCES

1. Averboukh, L., et al. 1997. Regulation of S-100P expression by androgen. Prostate 29: 350-355.
2. Koltzscher, M., et al. 2000. Identification of hydrophobic amino acid residues involved in the formation of S-100P homodimers *in vivo*. Biochemistry 39: 9533-9539.
3. Gribenko, A.V., et al. 2002. Conformational and thermodynamic properties of peptide binding to the human S-100P protein. Protein Sci. 11: 1367-1375.

CHROMOSOMAL LOCATION

Genetic locus: S100P (human) mapping to 4p16.1.

SOURCE

S-100P (B-10) is a mouse monoclonal antibody raised against amino acids 9-95 mapping at the C-terminus of S-100P of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

S-100P (B-10) is available conjugated to agarose (sc-374547 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374547 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374547 PE), fluorescein (sc-374547 FITC), Alexa Fluor® 488 (sc-374547 AF488), Alexa Fluor® 546 (sc-374547 AF546), Alexa Fluor® 594 (sc-374547 AF594) or Alexa Fluor® 647 (sc-374547 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374547 AF680) or Alexa Fluor® 790 (sc-374547 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

S-100P (B-10) is recommended for detection of S-100P 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for S-100P siRNA (h): sc-61488, S-100P shRNA Plasmid (h): sc-61488-SH and S-100P shRNA (h) Lentiviral Particles: sc-61488-V.

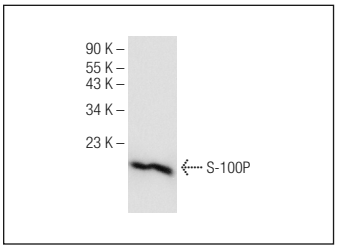
Molecular Weight of S-100P: 10 kDa.

Positive Controls: HUV-EC-C whole cell lysate: sc-364180.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



S-100P (B-10): sc-374547. Western blot analysis of S-100P expression in HUV-EC-C whole cell lysate.

SELECT PRODUCT CITATIONS

1. Zhang, M.F., et al. 2018. Differentiation model establishment and differentiation-related protein screening in primary cultured human sebocytes. Biomed Res. Int. 2018: 7174561.
2. Nakayama, H., et al. 2019. S100P regulates the collective invasion of pancreatic cancer cells into the lymphatic endothelial monolayer. Int. J. Oncol. 55: 211-222.
3. Qian, G., et al. 2021. Leukocyte proteomics coupled with serum metabolomics identifies novel biomarkers and abnormal amino acid metabolism in Kawasaki disease. J. Proteomics 239: 104183.

RESEARCH USE

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