

# S-100P (H-87): sc-98913

## 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 both 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. Koltzsch, M. and Gerke, V. 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.
4. Arumugam, T., et al. 2004. S-100P stimulates cell proliferation and survival via receptor for activated glycation end products (RAGE). *J. Biol. Chem.* 279: 5059-5065.
5. Arumugam, T., et al. 2005. S-100P promotes pancreatic cancer growth, survival and invasion. *Clin. Cancer Res.* 11: 5356-5364.
6. Gibadulinová, A., et al. 2005. Expression of S-100P protein correlates with and contributes to the tumorigenic capacity of HeLa cervical carcinoma cells. *Oncol. Rep.* 14: 575-582.
7. Jakubíková, L., et al. 2005. Expression of S-100P gene in cervical carcinoma cells is independent of E7 human papillomavirus oncogene. *Acta Virol.* 49: 133-137.
8. Jiang, F., et al. 2005. S-100P is selectively upregulated in tumor cell lines challenged with DNA cross-linking agents. *Leuk. Res.* 29: 1181-1190.
9. Tutar, Y. 2006. Dimerization and ion binding properties of S-100P protein. *Protein Pept. Lett.* 13: 301-306.

## CHROMOSOMAL LOCATION

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

## SOURCE

S-100P (H-87) is a rabbit polyclonal antibody raised against amino acids 9-95 mapping at the C-terminus of S-100P of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

S-100P (H-87) is recommended for detection of S-100P 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) 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 SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Cai, X.Y., et al. 2011. Association of increased S100B, S100A6 and S100P in serum levels with acute coronary syndrome and also with the severity of myocardial infarction in cardiac tissue of rat models with ischemia-reperfusion injury. *Atherosclerosis* 217: 536-542.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **S-100P (B-10): sc-374547**, our highly recommended monoclonal alternative to S-100P (H-87).