



S-100P (h): 293 Lysate: sc-110532

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 auto-crine 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., Liang, P., Kantoff, P.W. and Pardee, A.B. 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., Guzmán-Casado, M., Lopez, M.M. and Makhataдзе, G.I. 2002. Conformational and thermodynamic properties of peptide binding to the human S-100P protein. *Protein Sci.* 11: 1367-1375.
4. Arumugam, T., Simeone, D.M., Schmidt, A.M. and Logsdon, C.D. 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., Simeone, D.M., Van Golen, K. and Logsdon, C.D. 2005. S-100P promotes pancreatic cancer growth, survival and invasion. *Clin. Cancer Res.* 11: 5356-5364.
6. Gibadulinová, A., Baráthová, M., Kopáček, J., Hulíková, A., Pastoreková, S., Kettmann, R. and Pastorek, J. 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. Jakubicková, L., Baráthová, M., Pastoreková, S., Pastorek, J. and Gibadulinová, A. 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., Shults, K., Flye, L., Hashimoto, Y., Van Der Meer, R., Xie, J., Kravtsov, V., Price, J., Head, D.R. and Briggs, R.C. 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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

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

PRODUCT

S-100P (h): 293 Lysate represents a lysate of human S-100P transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

S-100P (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive S-100P antibodies. Recommended use: 10-20 µl per lane.

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

RESEARCH USE

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

PROTOCOLS

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