

p44S10 (m): 293 Lysate: sc-110722

BACKGROUND

In eukaryotic cells, selective breakdown of cellular proteins is ensured by two distinct pathways, ubiquitination and degradation by the 26S Proteasome. At specific stages of development, embryo- and tissue-specific components of the 26S Proteasome are formed by developmentally regulated alternative splicing, including Rpn10a through Rpn10e (also designated pUb-R2 through pUb-R5). The pUb-R2 subunit, originally identified as S5a, is ubiquitously expressed and may perform proteolysis constitutively in a wide variety of cells. p44S10 is a highly conserved proteasome regulatory subunit that is expressed in heart, liver, skeletal muscle and pancreas. In addition to normal tissue expression, p44S10 is also expressed in several melanoma cell lines, such as MCF7, 451Lu and WM164. Since forced expression of p44S10 in radial growth phase melanoma cells results in an increase in cellular proliferation, p44S10 may represent a potential link between regulation of proteasome activity and tumor cell proliferation *in vivo*.

REFERENCES

1. Lonnroth, I. and Lange, S. 1986. Purification and characterization of the antisecretory factor: a protein in the central nervous system and in the gut which inhibits intestinal hypersecretion induced by cholera toxin. *Biochim. Biophys. Acta* 883: 138-144.
2. Johansson, E., Lonnroth, I., Lange, S., Jonson, I., Jennische, E. and Lonnroth, C. 1995. Molecular cloning and expression of a pituitary gland protein modulating intestinal fluid secretion. *J. Biol. Chem.* 270: 20615-20620.
3. Coux, O., Tanaka, K. and Goldberg, A.L. 1996. Structure and functions of the 20S and 26S proteasomes. *Annu. Rev. Biochem.* 65: 801-847.
4. Voges, D., Zwickl, P. and Baumeister, W. 1999. The 26S Proteasome: a molecular machine designed for controlled proteolysis. *Annu. Rev. Biochem.* 68: 1015-1068.
5. Kawahara, H., Kasahara, M., Nishiyama, A., Ohsumi, K., Goto, T., Kishimoto, T., Saeki, Y., Yokosawa, H., Shimbara, N., Murata, S., Chiba, T., Suzuki, K. and Tanaka, K. 2000. Developmentally regulated, alternative splicing of the Rpn10 gene generates multiple forms of 26S proteasomes. *EMBO J.* 19: 4144-4153.
6. Ren, S., Smith, M.J., Louro, I.D., McKie-Bell, P., Bani, M.R., Wagner, M., Zochodne, B., Redden, D.T., Grizzle, W.E., Wang, N.D., Smith, D.I., Herbst, R.A., Bardenheuer, W., Opalka, B., Schutte, J., Trent, J.M., Ben-David, Y. and Ruppert, J.M. 2000. The p44S10 locus, encoding a subunit of the proteasome regulatory particle, is amplified during progression of cutaneous malignant melanoma. *Oncogene* 19: 1419-1427.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Psmc6 (mouse) mapping to 14 A1.

PRODUCT

p44S10 (m): 293 Lysate represents a lysate of mouse p44S10 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

p44S10 (m): 293 Lysate is suitable as a Western Blotting positive control for mouse reactive p44S10 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.