

SELENBP1 (m): 293T Lysate: sc-123437

BACKGROUND

Selenium is an essential trace element that is incorporated as selenocysteine into the primary structure of selenoproteins. Nutritional deficiency of selenium decreases selenoprotein concentrations and leads to pathologic conditions. Most of the known selenoproteins are members of the glutathione peroxidase or iodothyronine deiodinase families. SELENBP1 (selenium binding protein 1), also known as LPSB or SP56, is a 472 amino acid peripheral membrane protein that binds selenium and is implicated in detecting xenobiotics in cytoplasm. Existing as two alternatively spliced isoforms and a member of the selenium-binding protein family, SELENBP1 is likely involved in intra-Golgi protein transport, selenium-dependent cell growth inhibition and ubiquitination/deubiquitination-mediated protein degradation. SELENBP1 is highly expressed in prostate, lung, kidney, pancreas and liver, and is upregulated in the blood and brain of schizophrenia patients.

REFERENCES

1. Lanfear, J., et al. 1993. Different patterns of regulation of the genes encoding the closely related 56 kDa selenium- and acetaminophen-binding proteins in normal tissues and during carcinogenesis. *Carcinogenesis* 14: 335-340.
2. Chang, P.W., et al. 1997. Isolation, characterization, and chromosomal mapping of a novel cDNA clone encoding human selenium binding protein. *J. Cell. Biochem.* 64: 217-224.
3. Okunuki, Y., et al. 2007. Proteomic surveillance of autoimmunity in Behcet's disease with uveitis: selenium binding protein is a novel autoantigen in Behcet's disease. *Exp. Eye Res.* 84: 823-831.
4. Kanazawa, T., et al. 2008. The utility of SELENBP1 gene expression as a biomarker for major psychotic disorders: replication in schizophrenia and extension to bipolar disorder with psychosis. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 147B: 686-689.
5. Li, T., et al. 2008. Expression of selenium-binding protein 1 characterizes intestinal cell maturation and predicts survival for patients with colorectal cancer. *Mol. Nutr. Food Res.* 52: 1289-1299.
6. Jeong, J.Y., et al. 2009. Human selenium binding protein-1 (hSP56) interacts with VDU1 in a selenium-dependent manner. *Biochem. Biophys. Res. Commun.* 379: 583-588.
7. Kanazawa, T., et al. 2009. Family-based association study of SELENBP1 in schizophrenia. *Schizophr. Res.* 113: 268-272.
8. Zhang, C., et al. 2010. Progressive loss of selenium-binding protein 1 expression correlates with increasing epithelial proliferation and papillary complexity in ovarian serous borderline tumor and low-grade serous carcinoma. *Hum. Pathol.* 41: 255-261.

CHROMOSOMAL LOCATION

Genetic locus: Selenbp1 (mouse) mapping to 3 F2.1.

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.

PRODUCT

SELENBP1 (m): 293T Lysate represents a lysate of mouse SELENBP1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

SELENBP1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SELENBP1 antibodies. Recommended use: 10-20 µl per lane.

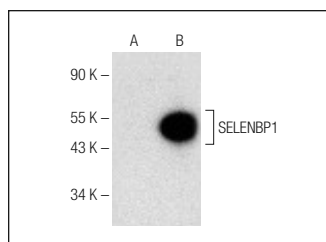
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SELENBP1 (G-9): sc-373726 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse SELENBP1 expression in SELENBP1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



SELENBP1 (G-9): sc-373726. Western blot analysis of SELENBP1 expression in non-transfected: sc-117752 (A) and mouse SELENBP1 transfected: sc-123437 (B) 293T whole cell lysates.

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.