SANTA CRUZ BIOTECHNOLOGY, INC.

SELENBP1 (G-9): sc-373726

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: SELENBP1 (human) mapping to 1q21.3; Selenbp1/Selenbp2 (mouse) mapping to 3 F2.1.

SOURCE

SELENBP1 (G-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 401-430 near the C-terminus of SELENBP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SELENBP1 (G-9) is available conjugated to agarose (sc-373726 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-373726 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373726 PE), fluorescein (sc-373726 FITC), Alexa Fluor® 488 (sc-373726 AF488), Alexa Fluor® 546 (sc-373726 AF546), Alexa Fluor® 594 (sc-373726 AF594) or Alexa Fluor® 647 (sc-373726 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373726 AF680) or Alexa Fluor® 790 (sc-373726 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373726 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

SELENBP1 (G-9) is recommended for detection of SELENBP1 of mouse, rat and human origin, and SELENBP2 of mouse 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

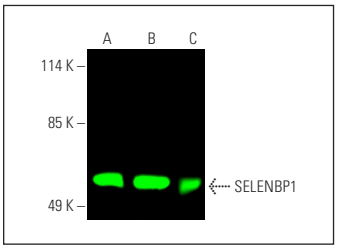
SELENBP1 (G-9) is also recommended for detection of SELENBP1 in additional species, including canine.

Suitable for use as control antibody for SELENBP1 siRNA (h): sc-88367, SELENBP1 shRNA Plasmid (h): sc-88367-SH and SELENBP1 shRNA (h) Lentiviral Particles: sc-88367-V.

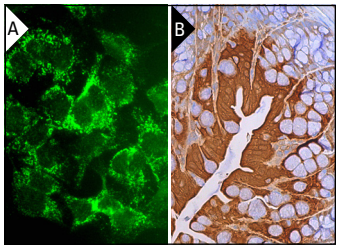
Molecular Weight of SELENBP1: 52 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, mouse liver extract: sc-2256 or rat colon tissue extract.

DATA



SELENBP1 (G-9): sc-373726. Near-Infrared western blot analysis of SELENBP1 expression in rat colon (**A**) and mouse liver (**B**) tissue extracts and COLO 320DM whole cell lysate (**C**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



SELENBP1 (G-9): sc-373726. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse colon tissue showing cytoplasmic and nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Su, L., et al. 2013. Identification of novel biomarkers for sepsis prognosis via urinary proteomic analysis using iTRAQ labeling and 2D-LC-MS/MS. PLoS ONE 8: e54237.
2. Sasuclark, A.R., et al. 2019. Cell-type specific analysis of selenium-related genes in brain. Antioxidants 8: 120.
3. Zhang, X., et al. 2020. Proteomic analysis of liver proteins of mice exposed to 1,2-dichloropropane. Arch. Toxicol. 94: 2691-2705.
4. Cai, C., et al. 2023. Single-cell RNA landscape of cell heterogeneity and immune microenvironment in ligation-induced vascular remodeling in rat. Atherosclerosis 377: 1-11.

STORAGE

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

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