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Selenium Binding Protein 1 Rabbit pAb

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Catalog # AP58131

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q13228
Reactivity	Human, Mouse, Rat
Predicted	Dog, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52391
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SBP1/Selenium Binding Protein 1
Epitope Specificity	401-472/472
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus. Cytoplasm, cytosol. Membrane; Peripheral membrane protein. Note=May associate with Golgi membrane. May associate with the membrane of autophagosomes.
SIMILARITY	Belongs to the selenium-binding protein family.
SUBUNIT	Interacts with USP33.
Post-translational modifications	The N-terminus is blocked.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Selenium is an essential trace element that confers tolerance to toxicity arising through exposure to heavy metals or other reactive xenobiotics. Selenium exhibits potent anticarcinogenic properties, and deficiency of selenium may cause certain neurologic diseases. Both effects are attributed to selenium-binding proteins. Selenium binding protein 1 is down-regulated in lung adenocarcinoma, colorectal cander and ovarian cancer. It is two-fold upregulated in the brains of patients suffering from schizophrenia, and is therefore a biomarker for this disease.

Additional Information

Gene ID	8991
Other Names	Methanethiol oxidase, MTO, 1.8.3.4, 56 kDa selenium-binding protein, SBP56, SP56, Selenium-binding protein 1, SELENBP1, SBP
Target/Specificity	Present in liver and colon (at protein level).

Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=2ug /Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

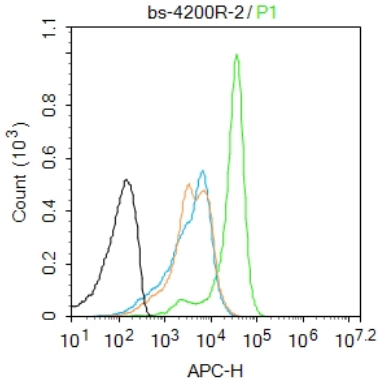
Protein Information

Name	SELENBP1
Synonyms	SBP
Function	Catalyzes the oxidation of methanethiol, an organosulfur compound known to be produced in substantial amounts by gut bacteria (PubMed:29255262). Selenium-binding protein which may be involved in the sensing of reactive xenobiotics in the cytoplasm. May be involved in intra-Golgi protein transport (By similarity).
Cellular Location	Nucleus. Cytoplasm, cytosol Membrane {ECO:0000250|UniProtKB:Q8VIF7}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q8VIF7}. Note=May associate with Golgi membrane (By similarity). May associate with the membrane of autophagosomes (By similarity). {ECO:0000250|UniProtKB:Q8VIF7}
Tissue Location	Widely expressed. Highly expressed in liver, lung, colon, prostate, kidney and pancreas. In brain, present both in neurons and glia (at protein level). Down-regulated in lung adenocarcinoma, colorectal carcinoma and ovarian cancer. Two-fold up-regulated in brain and blood from schizophrenia patients.

Background

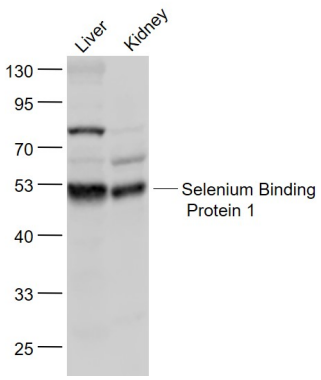
Selenium is an essential trace element that confers tolerance to toxicity arising through exposure to heavy metals or other reactive xenobiotics. Selenium exhibits potent anticarcinogenic properties, and deficiency of selenium may cause certain neurologic diseases. Both effects are attributed to selenium-binding proteins. Selenium binding protein 1 is down-regulated in lung adenocarcinoma, colorectal cander and ovarian cancer. It is two-fold upregulated in the brains of patients suffering from schizophrenia, and is therefore a biomarker for this disease.

Images

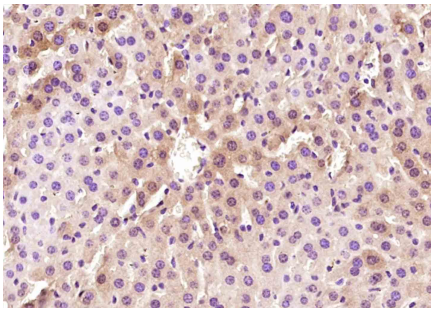


Blank control: Mouse spleen.
Primary Antibody (green line): Rabbit Anti-Selenium Binding Protein 1 antibody (AP58131)
Dilution: 2 µg /10^6 cells;
Isotype Control Antibody (orange line): Rabbit IgG .
Secondary Antibody : Goat anti-rabbit IgG-AF647
Dilution: 1 µg /test.
Protocol
The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at-20℃. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells

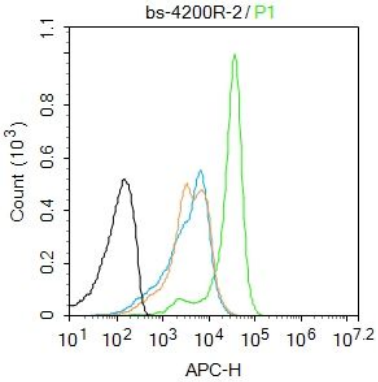
stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.



Sample:
Liver (Mouse) Lysate at 40 ug
Kidney (Mouse) Lysate at 40 ug
Primary: Anti- Selenium Binding Protein 1 (AP58131) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 52 kD
Observed band size: 52 kD



Paraformaldehyde-fixed, paraffin embedded (mouse liver); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Selenium Binding Protein 1) Polyclonal Antibody, Unconjugated (AP58131) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



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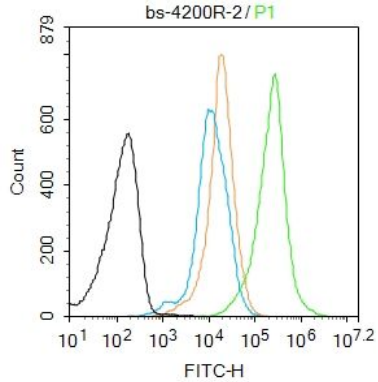

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Secondary Antibody : Goat anti-rabbit IgG-AF488R
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