abcam

Product datasheet

Anti-Selenium Binding Protein 1/SBP antibody ab90135

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Overview

Product name	Anti-Selenium Binding Protein 1/SBP antibody
Description	Rabbit polyclonal to Selenium Binding Protein 1/SBP
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC/IF, IP, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide corresponding to Human Selenium Binding Protein 1/SBP aa 1-100 conjugated to keyhole limpet haemocyanin. (Peptide available as **ab90251**)
Positive control	This antibody gave a positive signal in the following tissue lysates: Human Liver: Human Colon; Human Spleen; Mouse Liver; Mouse Lung; Rat Liver.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.
Purity	Immunogen affinity purified

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab90135 in the following tested applications.

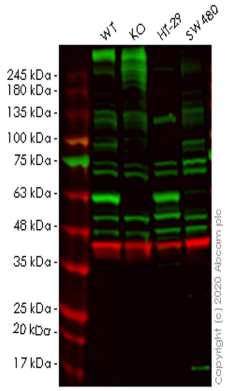
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ (1)	Use a concentration of 1 µg/ml. Detects a band of approximately 52 kDa (predicted molecular weight: 52 kDa).
ICC/IF		Use a concentration of 5 µg/ml.
IP		Use a concentration of 5 µg/ml.
IHC-P	★★★★☆ (1)	Use a concentration of 5 µg/ml.

Target

Function	Selenium-binding protein which may be involved in the sensing of reactive xenobiotics in the cytoplasm. May be involved in intra-Golgi protein transport.
Tissue specificity	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.
Sequence similarities	Belongs to the selenium-binding protein family.
Post-translational modifications	Phosphorylated. The N-terminus is blocked.
Cellular localization	Nucleus. Cytoplasm > cytosol. Membrane. May associate with Golgi membrane. May associate with the membrane of autophagosomes.

Images



Western blot - Anti-Selenium Binding Protein 1/SBP antibody (ab90135)

All lanes : Anti-Selenium Binding Protein 1/SBP antibody (ab90135) at 1/500 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : SELENBP1 knockout HeLa cell lysate
Lane 3 : HT-29 cell lysate
Lane 4 : SW 480 cell lysate

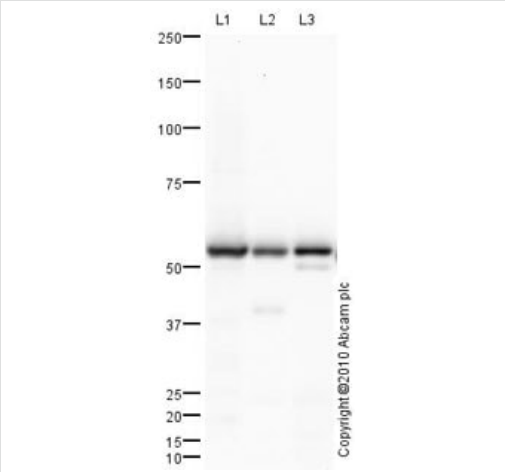
Lysates/proteins at 20 µg per lane.

Secondary
Lanes 1-3 : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) at 1/10000 dilution
Lane 4 : **ab216773** at 1/10000 dilution

Predicted band size: 52 kDa
Observed band size: 60 kDa

Lanes 1-3: Merged signal (red and green). Green - ab90135 observed at 60 kDa. Red - loading control **ab8245** observed at 36 kDa.

ab90135 Anti-Selenium Binding Protein 1/SBP antibody was shown to specifically react with Selenium Binding Protein 1/SBP in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265279** (knockout cell lysate **ab257662**) was used. Wild-type and Selenium Binding Protein 1/SBP knockout samples were subjected to SDS-PAGE. ab90135 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 500 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Selenium Binding Protein 1/SBP antibody (ab90135)

All lanes : Anti-Selenium Binding Protein 1/SBP antibody (ab90135) at 1 µg/ml

Lane 1 : Human liver tissue lysate - total protein (**ab29889**)
Lane 2 : Human colon tissue lysate - total protein (**ab30051**)
Lane 3 : Human spleen tissue lysate - total protein (**ab29699**)

Lysates/proteins at 10 µg per lane.

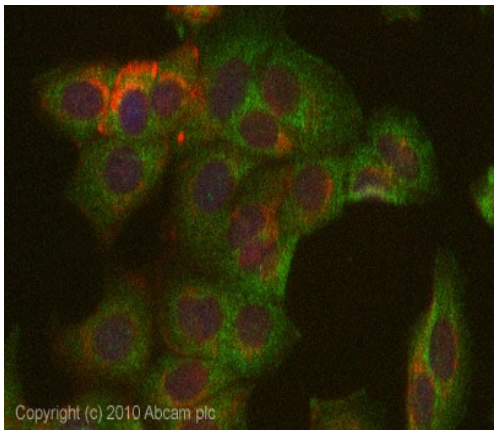
Secondary
All lanes : Goat polyclonal to Rabbit IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

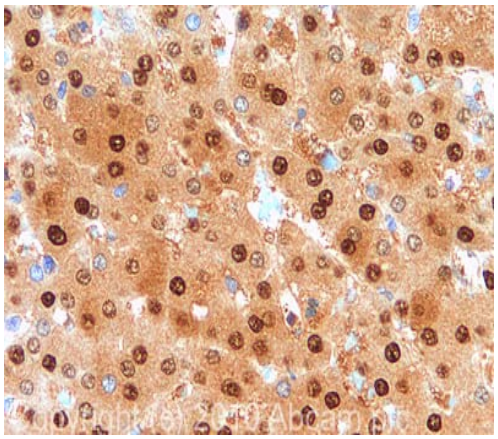
Predicted band size: 52 kDa
Observed band size: 52 kDa
Additional bands at: 50 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 1 minute



Immunocytochemistry/ Immunofluorescence - Anti-Selenium Binding Protein 1/SBP antibody (ab90135)

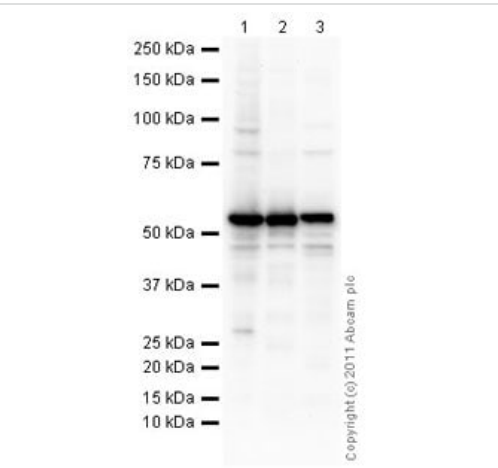
ICC/IF image of ab90135 stained MCF-7 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal Goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab90135, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 Goat anti-Rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This antibody also gave a positive result in 4% PFA fixed (10 min) HeLa cells at 5µg/ml, and in 100% Methanol fixed (5 min) HeLa, and Hek293 cells at 5µg/ml.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Selenium Binding Protein 1/SBP antibody (ab90135)

IHC image of ab90135 staining in Normal Human Liver formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab90135, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Western blot - Anti-Selenium Binding Protein 1/SBP antibody (ab90135)

All lanes : Anti-Selenium Binding Protein 1/SBP antibody (ab90135) at 1 µg/ml

Lane 1 : Liver (Mouse) Tissue Lysate
Lane 2 : Lung (Mouse) Tissue Lysate
Lane 3 : Liver (Rat) Tissue Lysate

Lysates/proteins at 10 µg per lane.

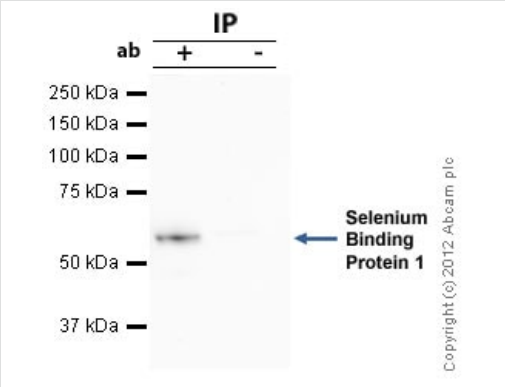
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (**ab97080**) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 52 kDa
Observed band size: 52 kDa

Exposure time: 1 minute



Immunoprecipitation - Anti-Selenium Binding Protein 1/SBP antibody (ab90135)

Selenium Binding Protein 1/SBP was immunoprecipitated using 0.5mg Mouse Liver tissue lysate, 5µg of Rabbit polyclonal to Selenium Binding Protein 1/SBP and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, Mouse Liver tissue lysate lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.
Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70^{o}C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab90135.
Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (**ab99697**).
Band: 52kDa; Selenium Binding Protein 1/SBP

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