abcam

Product datasheet

Anti-SREBP1 antibody ab28481

10 Abreviews 118 References 5 Images

Overview

Product name	Anti-SREBP1 antibody
Description	Rabbit polyclonal to SREBP1
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide corresponding to Mouse SREBP1 aa 32-47. Sequence: MLQLINNQDSDFPGLF Database link: **Q9WTN3** (Peptide available as **ab31099**) Run BLAST with Run BLAST with
Positive control	ICC/IF: Human HepG2 cells, mouse NIH-3T3, C2C12 cells; WB: mouse and rat liver, MCF-7 and MDA-MB-231 cell lysates
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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS, 0.1% BSA
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab28481 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
ICC/IF	★★★☆☆ (2)	1/50 - 1/500.
WB	★★★☆☆ (4)	1/500 - 1/5000. Detects an ~68 and 120 kDa protein representing SREBP1 in mouse and rat liver samples as well as rat kidney samples. A predominant band at ~68 kDa (active cleaved site) is seen and a band at ~120 kDa (inactive precursor) may not be seen or it may be diminished.

Target

Function Transcriptional activator required for lipid homeostasis. Regulates transcription of the LDL receptor gene as well as the fatty acid and to a lesser degree the cholesterol synthesis pathway (By similarity). Binds to the sterol regulatory element 1 (SRE-1) (5'-ATCACCCCAC-3'). Has dual sequence specificity binding to both an E-box motif (5'-ATCACGTGA-3') and to SRE-1 (5'-ATCACCCCAC-3').

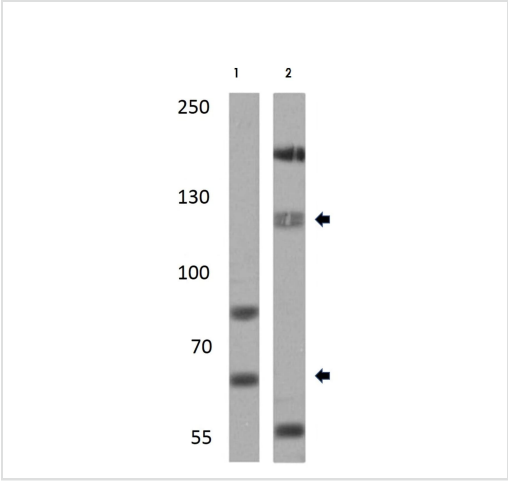
Tissue specificity Expressed in a wide variety of tissues, most abundant in liver and adrenal gland. In fetal tissues lung and liver shows highest expression. Isoform SREBP-1C predominates in liver, adrenal gland and ovary, whereas isoform SREBP-1A predominates in hepatoma cell lines. Isoform SREBP-1A and isoform SREBP-1C are found in kidney, brain, white fat, and muscle.

Sequence similarities Belongs to the SREBP family.
Contains 1 basic helix-loop-helix (bHLH) domain.

Post-translational modifications At low cholesterol the SCAP/SREBP complex is recruited into COPII vesicles for export from the ER. In the Golgi complex SREBPs are cleaved sequentially by site-1 and site-2 protease. The first cleavage by site-1 protease occurs within the luminal loop, the second cleavage by site-2 protease occurs within the first transmembrane domain and releases the transcription factor from the Golgi membrane. Apoptosis triggers cleavage by the cysteine proteases caspase-3 and caspase-7.
Phosphorylated by AMPK, leading to suppress protein processing and nuclear translocation, and repress target gene expression. Phosphorylation at Ser-402 by SIK1 represses activity possibly by inhibiting DNA-binding.

Cellular localization Nucleus and Endoplasmic reticulum membrane. Golgi apparatus membrane. Cytoplasmic vesicle > COPII-coated vesicle membrane. Moves from the endoplasmic reticulum to the Golgi in the absence of sterols.

Images



Western blot - Anti-SREBP1 antibody (ab28481)

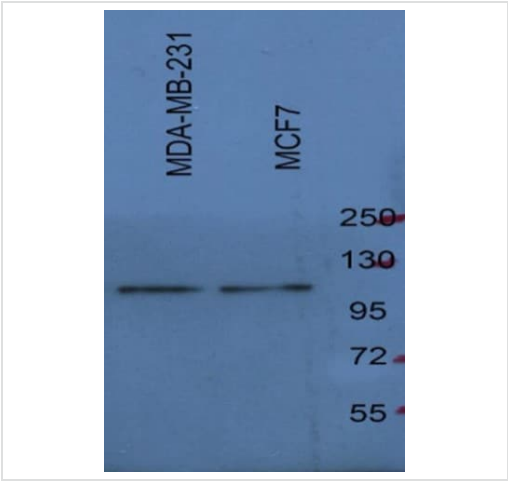
All lanes : Anti-SREBP1 antibody (ab28481) at 1/1000 dilution

Lane 1 : Mouse liver lysate
Lane 2 : Rat liver lysate

Lysates/proteins at 25 µg per lane.

Secondary
All lanes : HRP-conjugated secondary antibody

Developed using the ECL technique.



Western blot - Anti-SREBP1 antibody (ab28481)

All lanes : Anti-SREBP1 antibody (ab28481) at 1/1000 dilution

Lane 1 : MDA-MB-231 cell lysate with Fat-free milk / PBST
Lane 2 : MCF-7 cell lysate with Fat-free milk / PBST

Lysates/proteins at 20 µg per lane.

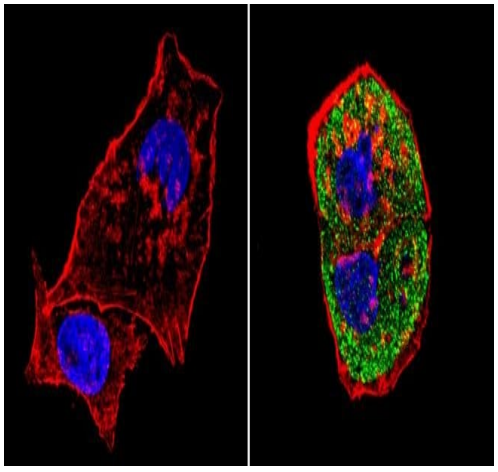
Blocking peptides at 5 % per lane.

Secondary
All lanes : Goat anti-rabbit IgG-HRP at 1/5000 dilution

Developed using the ECL technique.

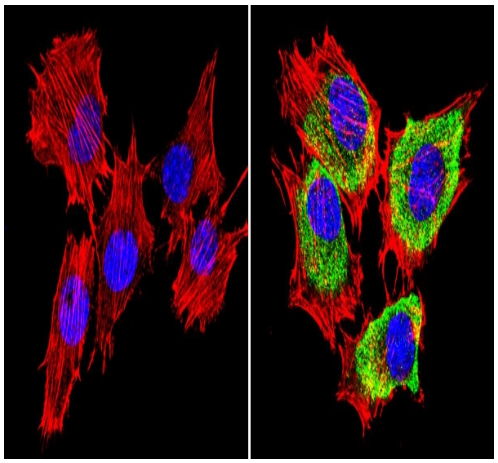
Observed band size: 120 kDa

Western blot analysis on a 4-8% SDS-PAGE gel.



Immunocytochemistry/ Immunofluorescence - Anti-SREBP1 antibody (ab28481)

Immunocytochemical analysis of formalin-fixed HepG2 cells (human liver hepatocellular carcinoma cell line) using immunofluorescence to label SREBP1 with ab28481 at a concentration of 1/100 in 3% BSA-PBS and incubated overnight in a humid environment at 4°C. Prior to labelling, cells were permeablised with 0.1% Triton X-100 in TBS for between 5 and 10 minutes, they were subsequently blocked with 3% BSA-PBS for 30 minutes at room temperature. The secondary used was a DyLight® conjugate (green) and was incubated at room temperature in the dark. The cells were counterstained with DAPI against DNA labelling the nucear compartments blue and a red fluorescent phalloidin stain against F-Actin. Magnification was 60X
The left image is a negative control in the absence of ab28481, the right image is in the prescence of ab28481, the secondary and counterstains.



Immunocytochemistry/ Immunofluorescence - Anti-SREBP1 antibody (ab28481)

Immunocytochemical analysis of formalin-fixed C2C12 cell lines using immunofluorescence to label SREBP1 with ab28481 at a concentration of 1/100 in 3% BSA-PBS and incubated overnight in a humid environment at 4°C. Prior to labelling, cells were permeablised with 0.1% Triton X-100 in TBS for between 5 and 10 minutes, they were subsequently blocked with 3% BSA-PBS for 30 minutes at room temperature. The secondary used was a DyLight® conjugate (green) and was incubated at room temperature in the dark. The cells were counterstained with DAPI against DNA labelling the nucear compartments blue and a red fluorescent phalloidin stain against F-Actin. Magnification was 60X
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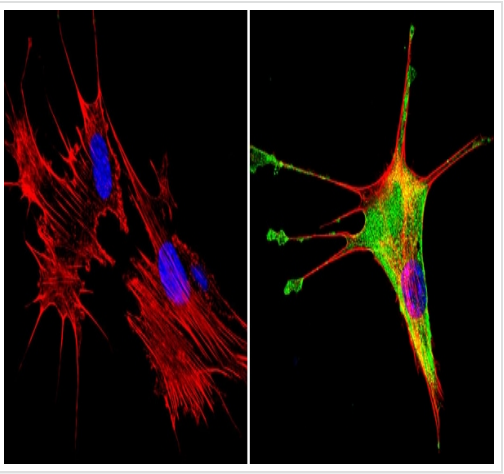

Immunocytochemistry/ Immunofluorescence - Anti-SREBP1 antibody (ab28481)

Immunocytochemical analysis of formalin-fixed NIH 3T3 cell lines using immunofluorescence to label SREBP1 with ab28481 at a concentration of 1/100 in 3% BSA-PBS and incubated overnight in a humid environment at 4°C. Prior to labelling, cells were permeablised with 0.1% Triton X-100 in TBS for between 5 and 10 minutes, they were subsequently blocked with 3% BSA-PBS for 30 minutes at room temperature. The secondary used was a DyLight® conjugate (green) and was incubated at room temperature in the dark. The cells were counterstained with DAPI against DNA labelling the nucear compartments blue and a red fluorescent phalloidin stain against F-Actin. Magnification is 60X
The left image is a negative control in the absence of ab28481, the right image is in the prescence of ab28481, the secondary and counterstains.

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