


Product datasheet

Anti-SFPQ antibody ab38148

★★★★☆ [3 Abreviews](#) [29 References](#) [5 Images](#)

Overview

Product name	Anti-SFPQ antibody
Description	Rabbit polyclonal to SFPQ
Host species	Rabbit
Specificity	Replenishment batches of our polyclonal antibody, ab38148 are tested in WB. Previous batches were additionally validated in ICC/IF and IHC-P. These applications are still expected to work and are covered by our Abpromise guarantee. You may also be interested in our alternative recombinant antibody, ab177149 .
Tested applications	Suitable for: WB, ICC/IF, IHC-P
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat, Zebrafish 
Immunogen	Synthetic peptide conjugated to KLH derived from within residues 650 to the C-terminus of Human SFPQ. Read Abcam's proprietary immunogen policy (Peptide available as ab39323 .)
Positive control	WB: HeLa; HEK293; MCF-7; HepG2; NIH3T3 Whole Cell Lysates; IHC-P: Human colon cancer; ICC/IF: HeLa cells.
General notes	<p>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.</p> <p>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</p>

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 ab38148 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	★★★★★ (2)	Use a concentration of 1 µg/ml. Detects a band of approximately 95 kDa (predicted molecular weight: 76 kDa).
ICC/IF		Use a concentration of 1 - 5 µg/ml.
IHC-P		Use a concentration of 1 µg/ml.

Target

Function

DNA- and RNA binding protein, involved in several nuclear processes. Essential pre-mRNA splicing factor required early in spliceosome formation and for splicing catalytic step II, probably as an heteromer with NONO. Binds to pre-mRNA in spliceosome C complex, and specifically binds to intronic polypyrimidine tracts. Interacts with U5 snRNA, probably by binding to a purine-rich sequence located on the 3' side of U5 snRNA stem 1b. May be involved in a pre-mRNA coupled splicing and polyadenylation process as component of a snRNP-free complex with SNRPA/U1A. The SFPQ-NONO heteromer associated with MATR3 may play a role in nuclear retention of defective RNAs. SFPQ may be involved in homologous DNA pairing; in vitro, promotes the invasion of ssDNA between a duplex DNA and produces a D-loop formation. The SFPQ-NONO heteromer may be involved in DNA unwinding by modulating the function of topoisomerase I/TOP1; in vitro, stimulates dissociation of TOP1 from DNA after cleavage and enhances its jumping between separate DNA helices. The SFPQ-NONO heteromer may be involved in DNA nonhomologous end joining (NHEJ) required for double-strand break repair and V(D)J recombination and may stabilize paired DNA ends; in vitro, the complex strongly stimulates DNA end joining, binds directly to the DNA substrates and cooperates with the Ku70/G22P1-Ku80/XRCC5 (Ku) dimer to establish a functional preligation complex. SFPQ is involved in transcriptional regulation. Transcriptional repression is probably mediated by an interaction of SFPQ with SIN3A and subsequent recruitment of histone deacetylases (HDACs). The SFPQ-NONO/SF-1 complex binds to the CYP17 promoter and regulates basal and cAMP-dependent transcriptional activity. SFPQ isoform Long binds to the DNA binding domains (DBD) of nuclear hormone receptors, like RXRA and probably THRA, and acts as transcriptional corepressor in absence of hormone ligands. Binds the DNA sequence 5'-CTGAGTC-3' in the insulin-like growth factor response element (IGFRE) and inhibits IGF-I-stimulated transcriptional activity.

Involvement in disease

Note=A chromosomal aberration involving SFPQ may be a cause of papillary renal cell carcinoma (PRCC). Translocation t(X;1)(p11.2;p34) with TFE3.

Sequence similarities

Contains 2 RRM (RNA recognition motif) domains.

Post-translational modifications

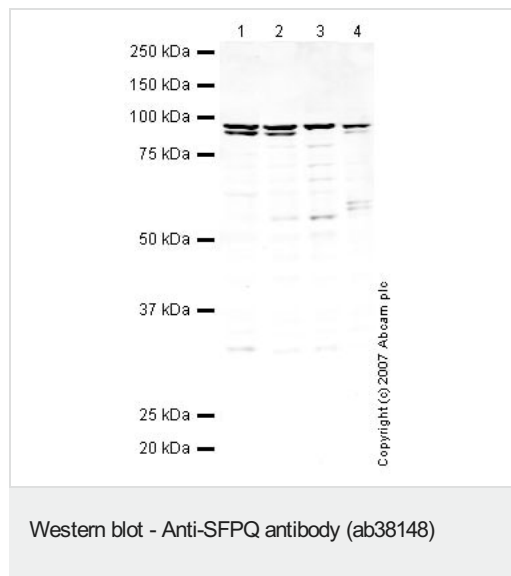
The N-terminus is blocked.

Phosphorylated on multiple serine and threonine residues during apoptosis. In vitro phosphorylated by PKC. Phosphorylation stimulates binding to DNA and D-loop formation, but inhibits binding to RNA.

Arg-7, Arg-9, Arg-19 and Arg-25 are dimethylated, probably to asymmetric dimethylarginine.

Cellular localization

Nucleus matrix. Predominantly in nuclear matrix.

Images

All lanes : Anti-SFPQ antibody (ab38148) at 1 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lane 2 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate

Lane 3 : MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate

Lane 4 : HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

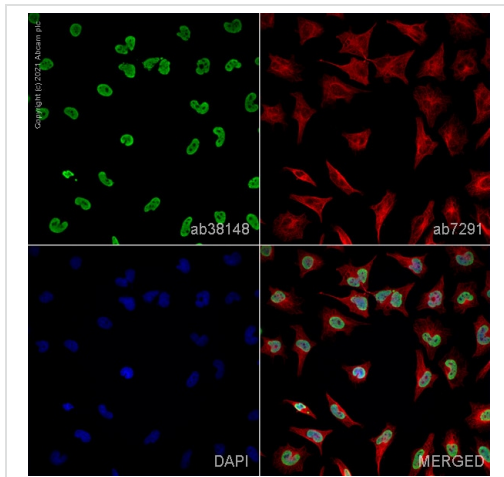
Performed under reducing conditions.

Predicted band size: 76 kDa

Observed band size: 95 kDa

Additional bands at: 90 kDa. We are unsure as to the identity of these extra bands.

We are unsure as to the identity of the 90kDa band as no isoforms at this molecular weight are known. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.



Immunocytochemistry/ Immunofluorescence - Anti-SFPQ antibody (ab38148)

ab38148 staining SFPQ in HeLa cells. The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.1% PBS-Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at 4°C with ab38148 at 1 µg/ml and **ab7291**, Mouse monoclonal [DM1A] to alpha Tubulin - Loading Control. Cells were then incubated with **ab150081**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 488), pre-adsorbed at 1/1000 dilution (shown in green) and **ab150120**, Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 594), pre-adsorbed at 1/1000 dilution (shown in pseudocolour red). Nuclear DNA was labelled with DAPI (shown in blue).

Also suitable in cells fixed with 100% methanol (5 min).

Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Western blot - Anti-SFPQ antibody (ab38148)

Anti-SFPQ antibody (ab38148) at 1 µg/ml + NIH 3T3 (Mouse embryonic fibroblast cell line) Whole Cell Lysate at 10 µg

Secondary

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

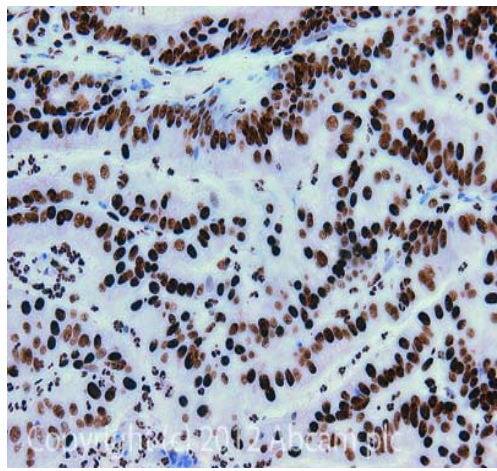
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 76 kDa

Observed band size: 100 kDa

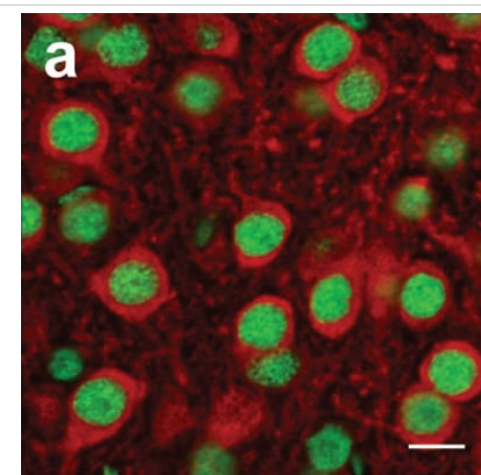
Exposure time: 1 minute



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFPQ antibody (ab38148)

IHC image of SFPQ staining in Human colon cancer 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 ab38148, 1 µg/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.



Immunocytochemistry/ Immunofluorescence - Anti-SFPQ antibody (ab38148)

Image from Ke Y et al., PLoS One. 2012;7(4):e35678. Epub 2012 Apr 25. Fig 2.; doi:10.1371/journal.pone.0035678; April 25, 2012, PLoS ONE 7(4): e35678.

Immunofluorescence analysis of mouse amygdala tissue, staining SFPQ (green) with ab38148 at 1/200 dilution. An AlexaFluor®488-conjugated anti-rabbit IgG was used as the secondary antibody.

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