


Product datasheet

Anti-SFPQ antibody ab264196

3 Images

Overview

Product name	Anti-SFPQ antibody
Description	Rabbit polyclonal to SFPQ
Host species	Rabbit
Tested applications	Suitable for: IP, IHC-P, WB
Species reactivity	Reacts with: Human Predicted to work with: Mouse 
Immunogen	Synthetic peptide within Human SFPQ aa 1-50. The exact sequence is proprietary. Database link: P23246
Positive control	IHC-P: Human colon carcinoma tissue; WB: HeLa and HEK-293T cell lysates; IP: HeLa whole cell lysates.
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. Avoid freeze / thaw cycle.
Storage buffer	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: Tris buffered saline, 0.1% BSA
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab264196 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
IP		Use at 2-5 µg/mg of lysate.
IHC-P		1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		1/2000 - 1/10000.

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

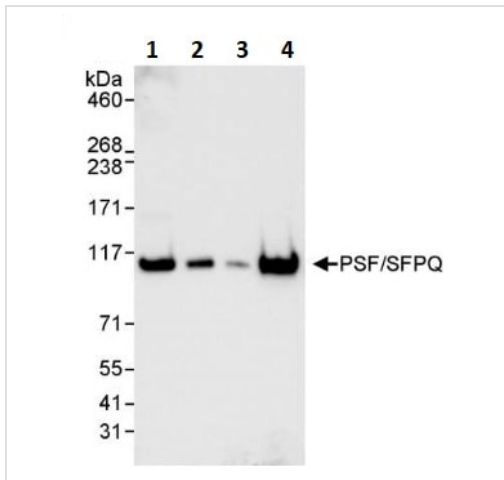
The N-terminus is blocked.

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.



Western blot - Anti-SFPQ antibody (ab264196)

All lanes : Anti-SFPQ antibody (ab264196) at 0.04 $\mu\text{g/ml}$

Lane 1 : HeLa whole cell lysates at 50 μg

Lane 2 : HeLa whole cell lysates at 15 μg

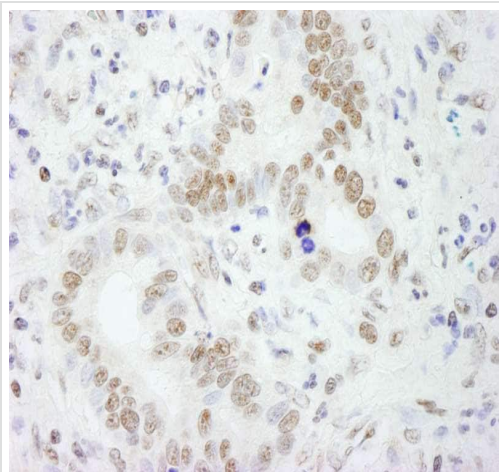
Lane 3 : HeLa whole cell lysates at 5 μg

Lane 4 : HEK-293T whole cell lysates at 50 μg

Detected with chemiluminescence with exposure time of 5 seconds.

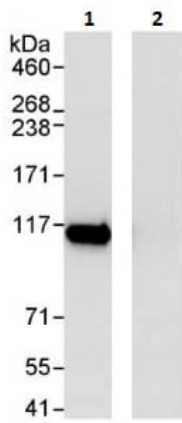
4-8% SDS-PAGE.

Secondary: Goat anti-Rabbit Light Chain HRP Conjugate.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFPQ antibody (ab264196)

Immunohistochemical analysis of formalin/PFA-fixed, paraffin-embedded human colon carcinoma tissue labeling SFPQ with ab264196 at 1/200 dilution. Detection: DAB.



Immunoprecipitation - Anti-SFPQ antibody
(ab264196)

SFPQ was immunoprecipitated from 1 mg of HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab264196 at 3 $\mu\text{g}/\text{mg}$ lysate. Western blot was performed from the immunoprecipitate using ab264196 at 1 $\mu\text{g}/\text{ml}$.

Lane 1: ab264196 IP in HeLa whole cell lysate.

Lane 2: Control IgG.

Exposure time: 30 secs.

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