abcam

Product datasheet

Anti-SFPQ antibody ab99357

1 References 3 Images

Overview

Product name	Anti-SFPQ antibody
Description	Rabbit polyclonal to SFPQ
Host species	Rabbit
Tested applications	**Suitable for:** WB, IP, IHC-P
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Rat, Rabbit, Horse, Chicken, Guinea pig, Cow, Dog, Turkey, Chimpanzee, Rhesus monkey, Gorilla, Orangutan, Xenopus tropicalis
Immunogen	A region within amino acids 657-707 of Human SFPQ (NP_005057.1).
Positive control	HeLa whole cell lysate. Mouse NIH3T3 cells.
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	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Purification notes	ab99357 was affinity purified using an epitope specific to SFPQ immobilized on solid support.
Clonality	Polyclonal
Isotype	IgG

Applications

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab99357 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		1/2000 - 1/10000. Predicted molecular weight: 76 kDa.
IP		Use at 2-5 µg/mg of lysate.
IHC-P		1/500 - 1/2000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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 avtivity. 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.

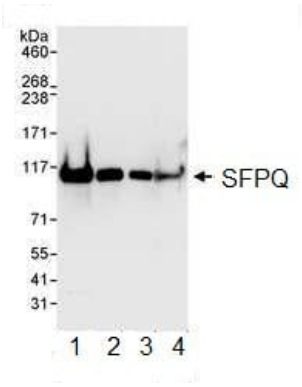
Involvement in disease Note=A chromosomal aberration involving SFPQ may be a cause of papillary renal cell carcinoma (PRCC). Translocation t(X;1)(p11.2;p34) with TFE3.

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



Western blot - Anti-SFPQ antibody (ab99357)

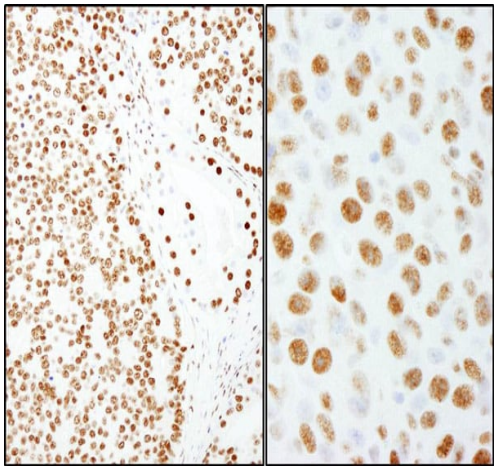
All lanes : Anti-SFPQ antibody (ab99357) at 0.04 µg/ml

Lane 1 : HeLa whole cell lysate at 50 µg
Lane 2 : HeLa whole cell lysate at 15 µg
Lane 3 : HeLa whole cell lysate at 5 µg
Lane 4 : Mouse NIH3T3 whole cell lysate at 50 µg

Developed using the ECL technique.

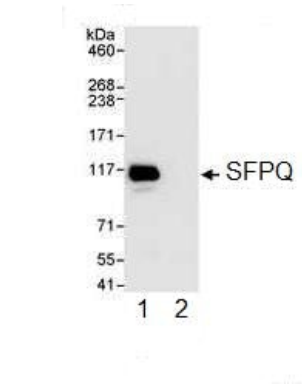
Predicted band size: 76 kDa

Exposure time: 3 seconds



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFPQ antibody (ab99357)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human prostate carcinoma (left) and mouse CT26 colon carcinoma (right) tissues labelling SFPQ with ab99357 at 1/500 (0.4 µg/ml). Detection: DAB.



Immunoprecipitation - Anti-SFPQ antibody (ab99357)

ab99357 at 1 µg/ml detecting SFPQ in HeLa whole cell lysate by western blot analysis following immunoprecipitation. Detection utilised ECL with a 1 second exposure.
For immunoprecipitation, ab99357 was used at at 3 µg/mg lysate; 1 mg of lysate was used for IP and 20% of IP was loaded.
Lane 1; IP using ab99357
Lane 2; IP using control IgG.

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