abcam

Product datasheet

Anti-SFPQ antibody [EPR11847] ab177149

Recombinant RabMAb

★★★★★ 2 Abreviews 13 References 7 Images

Overview

Product name	Anti-SFPQ antibody [EPR11847]
Description	Rabbit monoclonal [EPR11847] to SFPQ
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt, WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human and Rat colon and Mouse testis tissue; ICC/IF: NIH/3T3 cells; Flow Cyt: HeLa cells. WB: HeLa, NIH/3T3 and C2C12 whole cell lysates. Rat brain lysate.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR11847
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab177149 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
Flow Cyt		1/50.
WB	★★★★★ (1)	1/10000 - 1/50000. Detects a band of approximately 100 kDa (predicted molecular weight: 76 kDa).
IHC-P		1/10000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. **For unpurified use at 1/100 - 1/250.**
ICC/IF	★★★★★ (1)	1/50 - 1/100.

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.

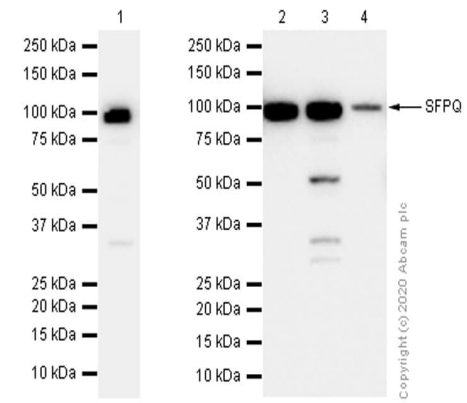
Involvement in disease Note=A chromosomal aberration involving SFPQ may be a cause of papillary renal cell carcinoma (PRCC). Translocation t(X;1)(p11.2;p34) with TFE3.

Sequence similarities Contains 2 RRM (RNA recognition motif) domains.

Post-translational The N-terminus is blocked.

modifications	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



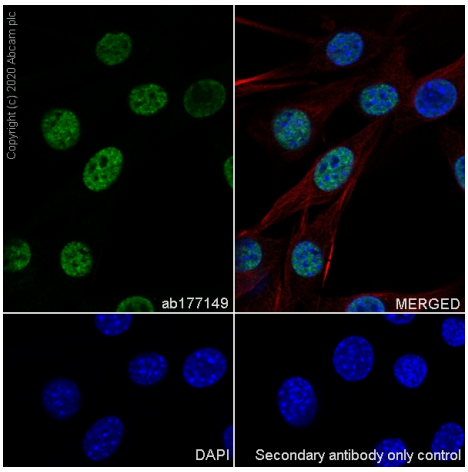
Western blot - Anti-SFPQ antibody [EPR11847] (ab177149)

All lanes : Anti-SFPQ antibody [EPR11847] (ab177149) at 1/10000 dilution (Purified)

Lane 1 : HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate
Lane 2 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate
Lane 3 : C2C12 (Mouse myoblasts myoblast) whole cell lysate
Lane 4 : Rat brain lysate

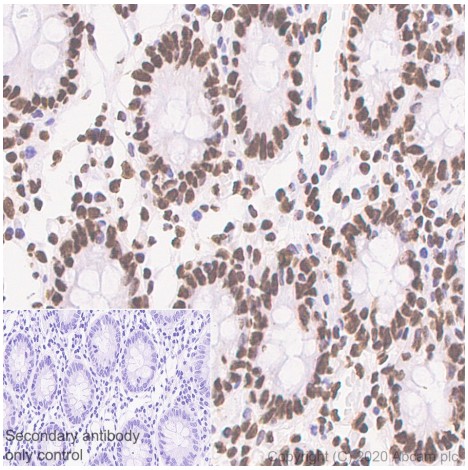
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 76 kDa



Immunocytochemistry/ Immunofluorescence - Anti-SFPQ antibody [EPR11847] (ab177149)

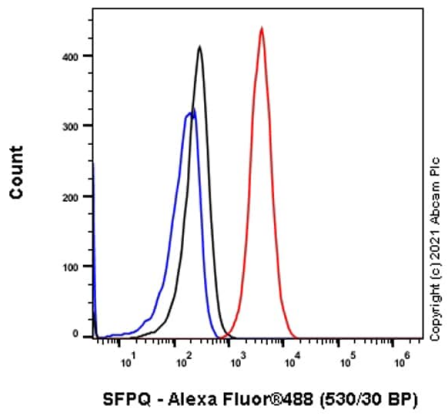
Immunocytochemistry analysis of NIH/3T3 (Mouse embryonic fibroblast) cells labeling SFPQ with purified ab177149 at 1/50 dilution (9.7 µg/mL). Cells were fixed in 4% paraformaldehyde and permeabilized with 0.1% TritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFPQ antibody [EPR11847] (ab177149)

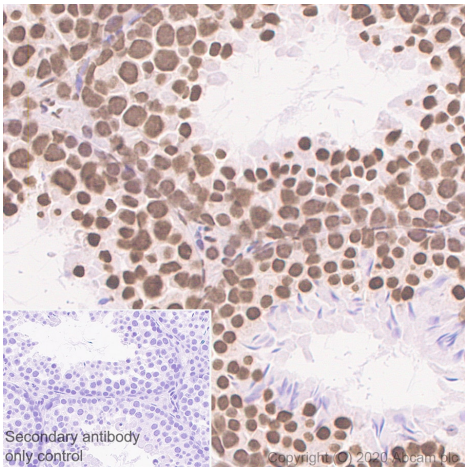
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue sections labeling SFPQ with purified ab177149 at 1/10000 dilution (0.05 µg/mL). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) secondary antibody was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument



Flow Cytometry - Anti-SFPQ antibody [EPR11847] (ab177149)

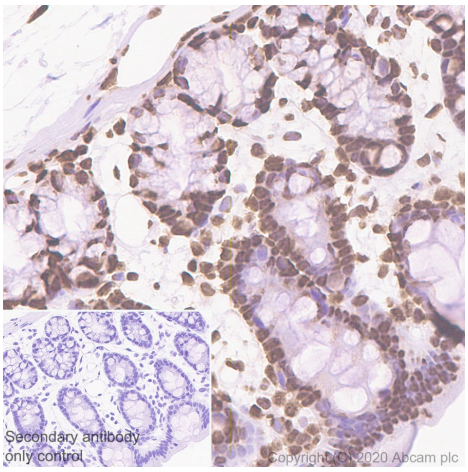
Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labelling SFPQ with purified ab177149 at 1/50 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFPQ antibody [EPR11847] (ab177149)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse testis tissue sections labeling SFPQ with purified ab177149 at 1/10000 dilution (0.05 µg/mL). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) secondary antibody was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control.

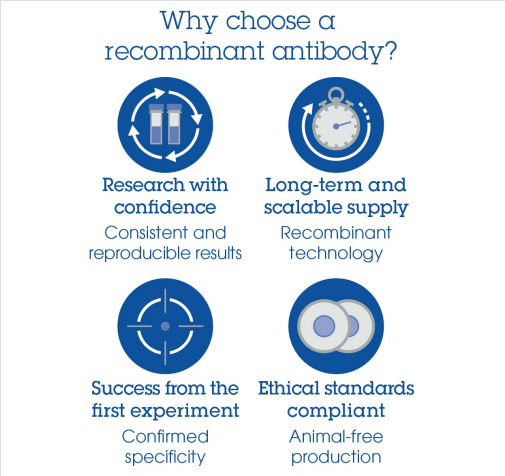
The immunostaining was performed on a Leica Biosystems BOND® RX instrument



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFPQ antibody [EPR11847] (ab177149)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat colon tissue sections labeling SFPQ with purified ab177149 at 1/10000 dilution (0.05 µg/mL). Heat mediated antigen retrieval was performed using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Tissue was counterstained with Hematoxylin. Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**) secondary antibody was used at 1/0 dilution. PBS instead of the primary antibody was used as the negative control.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument



Anti-SFPQ antibody [EPR11847] (ab177149)

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