abcam

Product datasheet

Anti-SF2 antibody [EPR8239] ab129108

Recombinant RabMAb

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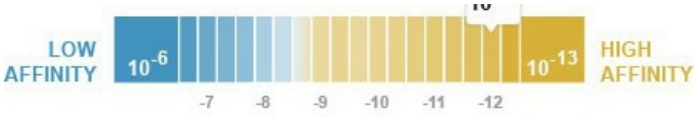
Overview

Product name	Anti-SF2 antibody [EPR8239]
Description	Rabbit monoclonal [EPR8239] to SF2
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt, WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human SF2 aa 1-100. The exact sequence is proprietary.
Positive control	WB: HepG2, Raji, HeLa, 293T cell lysates; mouse spleen. IHC-P: Human prostatic hyperplasia and breast carcinoma, rat kidney and mouse cerebral cortex tissues. ICC/IF: HeLa cells. Flow Cyt: HeLa cells.
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. **We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.**

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. Stable for 12 months at -20°C.
Dissociation constant (K_D)	K_D = 8.00 x 10 $^{-12}$ M

10^{-12}



Learn more about K_D

Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 0.05% BSA, 40% Glycerol
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR8239
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab129108** 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		Use at an assay dependent concentration.
WB		1/10000. Detects a band of approximately 22-32 kDa (predicted molecular weight: 28 kDa).
IHC-P		1/800 - 1/1500. 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	★☆☆☆☆	1/150 - 1/500.

Target

Function	Plays a role in preventing exon skipping, ensuring the accuracy of splicing and regulating alternative splicing. Interacts with other spliceosomal components, via the RS domains, to form a bridge between the 5'- and 3'-splice site binding components, U1 snRNP and U2AF. Can stimulate binding of U1 snRNP to a 5'-splice site-containing pre-mRNA. Binds to purine-rich RNA sequences, either the octamer, 5'-RGAAGAAC-3' (r=A or G) or the decamers, AGGACAGAGC/AGGACGAAGC. Binds preferentially to the 5'-CGAGGCG-3' motif in vitro. Three copies of the octamer constitute a powerful splicing enhancer in vitro, the ASF/SF2 splicing enhancer (ASE) which can specifically activate ASE-dependent splicing. Isoform ASF-2 and isoform ASF-3 act as splicing repressors.
Sequence similarities	Belongs to the splicing factor SR family. Contains 2 RRM (RNA recognition motif) domains.
Domain	The RRM 2 domain plays an important role in governing both the binding mode and the phosphorylation mechanism of the RS domain by SRPK1. RS domain and RRM 2 are uniquely positioned to initiate a highly directional (C-terminus to N-terminus) phosphorylation reaction in which the RS domain slides through an extended electronegative channel separating the docking

groove of SRPK1 and the active site. RRM 2 binds toward the periphery of the active site and guides the directional phosphorylation mechanism. Both the RS domain and an RRM domain are required for nucleocytoplasmic shuttling.

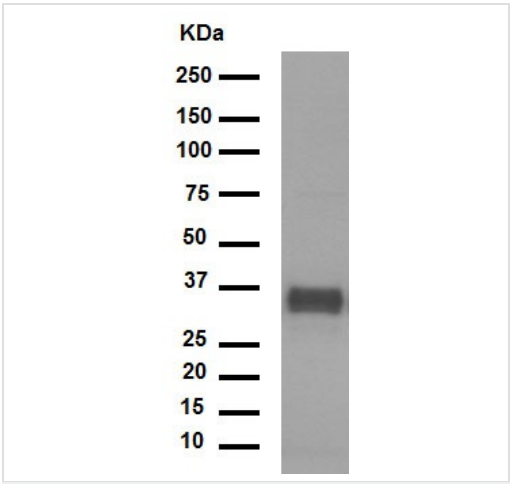
Post-translational modifications

Phosphorylated by CLK1, CLK2, CLK3 and CLK4. Phosphorylated by SRPK1 at multiple serines in its RS domain via a directional (C-terminal to N-terminal) and a dual-track mechanism incorporating both processive phosphorylation (in which the kinase stays attached to the substrate after each round of phosphorylation) and distributive phosphorylation steps (in which the kinase and substrate dissociate after each phosphorylation event). The RS domain of SRSF1 binds to a docking groove in the large lobe of the kinase domain of SRPK1 and this induces certain structural changes in SRPK1 and/or RRM 2 domain of SRSF1, allowing RRM 2 to bind the kinase and initiate phosphorylation. The cycles continue for several phosphorylation steps in a processive manner (steps 1-8) until the last few phosphorylation steps (approximately steps 9-12). During that time, a mechanical stress induces the unfolding of the beta-4 motif in RRM 2, which then docks at the docking groove of SRPK1. This also signals RRM 2 to begin to dissociate, which facilitates SRSF1 dissociation after phosphorylation is completed.
Arg-97 is dimethylated, probably to asymmetric dimethylarginine.

Cellular localization

Cytoplasm. Nucleus speckle. In nuclear speckles. Shuttles between the nucleus and the cytoplasm.

Images



Western blot - Anti-SF2 antibody [EPR8239] (ab129108)

Anti-SF2 antibody [EPR8239] (ab129108) at 1/10000 dilution (purified) + Mouse spleen tissue at 20 µg

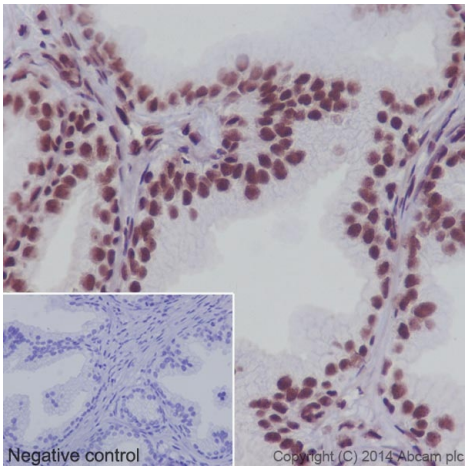
Secondary

Peroxidase-conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 28 kDa

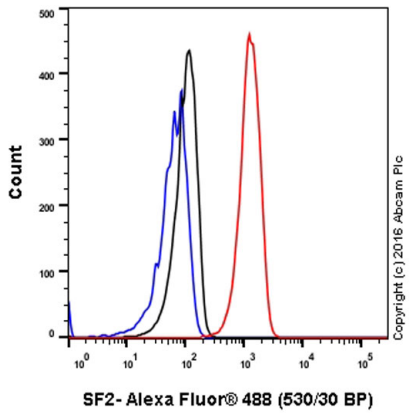
Blocking buffer and concentration: 5% NFDM/TBST.

Diluting buffer and concentration: 5% NFDM /TBST.



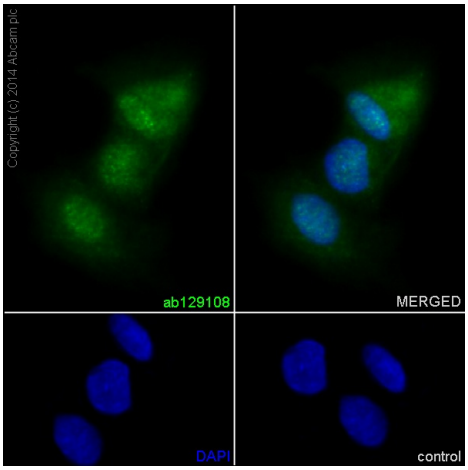
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF2 antibody [EPR8239] (ab129108)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human prostatic hyperplasia tissue labelling SF2 with purified ab129108 at 1/800. Heat mediated antigen retrieval was performed using Tris/EDTA buffer, pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Flow Cytometry - Anti-SF2 antibody [EPR8239] (ab129108)

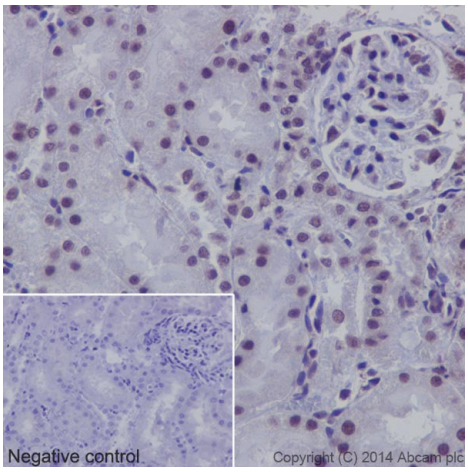
Flow Cytometry analysis of HeLa cells labelling SF2 with purified ab129108 at a dilution of 1/70 (red). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. An Alexa Flour® 488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunocytochemistry/ Immunofluorescence - Anti-SF2 antibody [EPR8239] (ab129108)

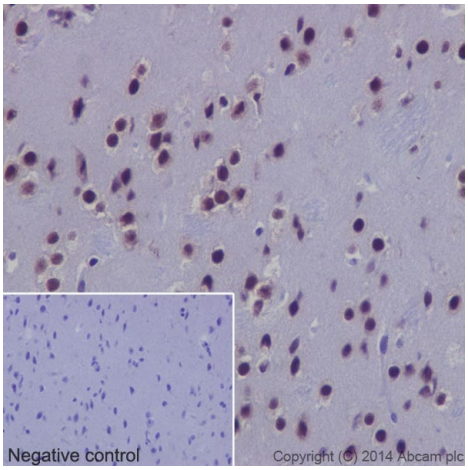
Immunocytochemistry/Immunofluorescence analysis of HeLa cells labelling SF2 with purified ab129108 at 1/150. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. Counterstained with DAPI.

Control - primary antibody (1/150), secondary antibody ab150120 an Alexa Fluor® 594-conjugate goat anti-mouse IgG (1/500).



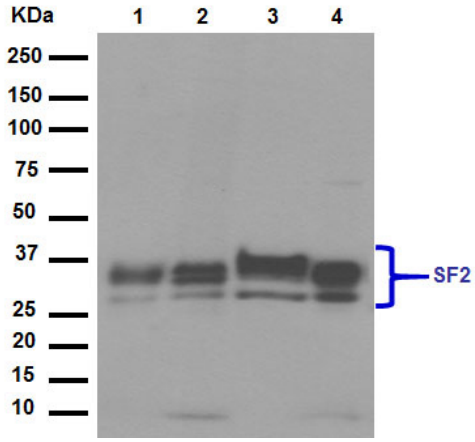
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF2 antibody [EPR8239] (ab129108)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue labelling SF2 with purified ab129108 at 1/800. Heat mediated antigen retrieval was performed using Tris/EDTA buffer, pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF2 antibody [EPR8239] (ab129108)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse cerebral cortex tissue labelling SF2 with purified ab129108 at 1/800. Heat mediated antigen retrieval was performed using Tris/EDTA buffer, pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Western blot - Anti-SF2 antibody [EPR8239] (ab129108)

All lanes : Anti-SF2 antibody [EPR8239] (ab129108) at 1/10000 dilution (purified)

Lane 1 : HepG2 cell lysate
Lane 2 : Raji cell lysate
Lane 3 : HeLa cell lysate
Lane 4 : 293T cell lysate

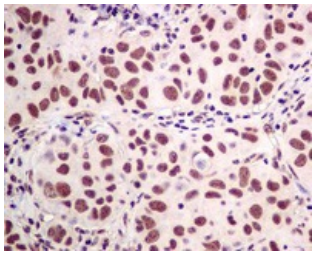
Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Peroxidase conjugated goat anti-rabbit IgG (H+L) at 1/1000 dilution

Predicted band size: 28 kDa

Blocking buffer and concentration: 5% NFDM/TBST.

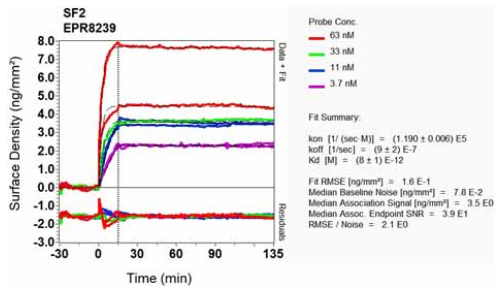
Diluting buffer and concentration: 5% NFDM /TBST.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SF2 antibody [EPR8239] (ab129108)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human breast carcinoma tissue labelling SF2 with unpurified ab129108 at 1/100.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Other - Anti-SF2 antibody [EPR8239] (ab129108)

Equilibrium disassociation constant (K_D)

Learn more about K_D

Click here to learn more about K_D

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