**Product datasheet**

**Anti-SF2 antibody ab38017**

🌟🌟🌟🌟 6 Abreviews   15 References   4 Images

---

### Overview

**Product name**
Anti-SF2 antibody

**Description**
Rabbit polyclonal to SF2

**Host species**
Rabbit

**Tested applications**
Suitable for: ICC/IF, IP, WB, IHC-P

**Species reactivity**
Reacts with: Human

Predicted to work with: Mouse, Chicken, Pig, Zebrafish

**Immunogen**
Synthetic peptide conjugated to KLH derived from residues 100 - 200 of Human SF2. Read Abcam's proprietary immunogen policy (Peptide available as ab38811.)

**Positive control**
This antibody gave a positive result in the following whole cell lysates: HeLa (Human epithelial carcinoma cell line) Jurkat (Human T cell lymphoblast-like cell line) A431 (Human epithelial carcinoma cell line) HEK 293 (Human embryonic kidney cell line) HepG2 (Human hepatocellular liver carcinoma cell line) MCF-7 (Human breast adenocarcinoma cell line) SHSY-5Y (Human neuroblastoma cell line) This antibody gave a positive result in IHC in the following FFPE tissue: Human normal spleen.

---

### 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**
Preservative: 0.02% Sodium Azide
Constituents: 1% BSA, PBS, pH 7.4

**Purity**
Immunogen affinity purified

**Clonality**
Polyclonal

**Isotype**
IgG

---

### Applications

Our Abpromise guarantee covers the use of ab38017 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/IF</td>
<td><img src="https://www.reviews.com/media/abreviews.png" alt="Rating" /></td>
<td>Use a concentration of 5 µg/ml.</td>
</tr>
<tr>
<td>IP</td>
<td><img src="https://www.reviews.com/media/abreviews.png" alt="Rating" /></td>
<td>1/500.</td>
</tr>
<tr>
<td>WB</td>
<td><img src="https://www.reviews.com/media/abreviews.png" alt="Rating" /></td>
<td>Use a concentration of 1 µg/ml. Detects a band of approximately 34 kDa (predicted molecular weight: 27 kDa).</td>
</tr>
<tr>
<td>IHC-P</td>
<td><img src="https://www.reviews.com/media/abreviews.png" alt="Rating" /></td>
<td>Use a concentration of 5 µg/ml.</td>
</tr>
</tbody>
</table>

Target

Abreviews

Notes

ICC/IF
Use a concentration of 5 µg/ml.

IP
1/500.

WB
Use a concentration of 1 µg/ml. Detects a band of approximately 34 kDa (predicted molecular weight: 27 kDa).

IHC-P
Use a concentration of 5 µg/ml.

Images
Western blot - Anti-SF2 antibody (ab38017)

All lanes: Anti-SF2 antibody (ab38017) at 1 µg/ml

Lane 1: HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2: Jurkat whole cell lysate (ab7899)
Lane 3: A431 whole cell lysate (ab7909)
Lane 4: HEK293 whole cell lysate (ab7902)
Lane 5: HepG2 whole cell lysate (ab7900)
Lane 6: MCF-7 (Human breast adenocarcinoma cell line) Whole Cell Lysate
Lane 7: SHSY-5Y (Human neuroblastoma 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: 27 kDa
Observed band size: 34 kDa

Why is the actual band size different from the predicted?

SF2 is extensively phosphorylated on serine residues in the RS domain (SwissProt).

ab38017 is targeted against all isoforms of the SF2 protein.
ICC/IF image of ab38017 stained human HeLa cells. The cells were PFA fixed (10 min), permabilised in TBS-T (20 min) and incubated with the antibody (ab38017, 5µg/ml) for 1h at room temperature. 1%BSA / 10% normal serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).

**All lanes** : Anti-SF2 antibody (ab38017) at 1 µg/ml

**Lane 1** : HeLa whole cell lysate
**Lane 2** : 293T whole cell lysate

Lysates/proteins at 20 µg per lane.

**Secondary**

**All lanes** : Alexa Fluor® conjugated goat anti-rabbit antibody at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size**: 27 kDa

**Observed band size**: 34 kDa

**why is the actual band size different from the predicted?**

**Additional bands at**: 50 kDa. We are unsure as to the identity of these extra bands.

**Exposure time**: 10 seconds
IHC image of SF2 staining in Human normal spleen formalin fixed paraffin embedded tissue section, performed on a Leica BondTM 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 ab38017, 5µg/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.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors