abcam

ab176561

Anti-SFT antibody [EPR13000(B)]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR13000(B)
Purification technique	Affinity purification Protein A
Concentration	0.395 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Expected

Species	Mouse
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

Expected

Species	Mouse
Dilution info	1/10 - 1/100
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000 - 1/50000
Notes	-

Species	Mouse
Dilution info	1/10000 - 1/50000
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	1/10 - 1/100

Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information UBE2D1

Function	Accepts ubiquitin from the E1 complex and catalyzes its covalent attachment to other proteins (PubMed:22496338). In vitro catalyzes 'Lys-48'-linked polyubiquitination (PubMed:20061386). Mediates the selective degradation of short-lived and abnormal proteins. Functions in the E6/E6-AP-induced ubiquitination of p53/TP53. Mediates ubiquitination of PEX5 and auto-ubiquitination of STUB1, TRAF6 and TRIM63/MURF1 (PubMed:18042044, PubMed:18359941). Ubiquitinates STUB1-associated HSP90AB1 in vitro (PubMed:18042044). Lacks inherent specificity for any particular lysine residue of ubiquitin (PubMed:18042044). Essential for viral activation of IRF3 (PubMed:19854139). Mediates polyubiquitination of CYP3A4 (PubMed:19103148).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The protein SFT also known as surfactant protein or SP plays a role in reducing surface tension in the lungs. It's a glycoprotein with a known mass of around 32 kDa. SFT mainly gets expressed in the alveolar type II cells in the lungs where it's secreted into the lung's extracellular lining. Its primary function involves aiding in lung stability and preventing alveolar collapse during respiration.
Biological function summary	Surfactant proteins contribute to innate immune defense and lung homeostasis. SFT is a component of the surfactant complex which includes other proteins and lipids. This protein acts at the air-liquid interface in the alveoli and engages in host defense functions. SFT activates alveolar macrophages and binds to a range of pathogens enhancing their clearance from the respiratory tract. It helps regulate inflammatory responses and maintain the balance of surfactant components in the lungs.
Pathways	SFT plays an integral role in the pulmonary surfactant metabolism pathway and the immune response pathway. In the pulmonary surfactant metabolism pathway it interacts with proteins like ABCA3 and lipids like phosphatidylcholine to ensure proper surfactant composition and recycling. In the immune response pathway SFT partners with complement proteins and defensins supporting pathogen clearance and preventing lung infections.
Associated diseases and disorders	SFT relates primarily to respiratory distress syndrome (RDS) and pulmonary alveolar proteinosis (PAP). In RDS an insufficient amount or dysfunction of surfactant proteins including SFT leads to alveolar collapse and impaired gas exchange. In PAP the protein's accumulation affects surfactant homeostasis disrupting lung function. These diseases tie SFT to other proteins like GM-CSF and ABCA3 which influence surfactant production and regulation.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

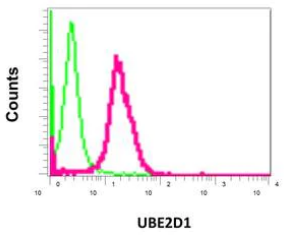
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

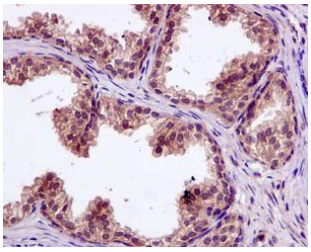
7 product images



Flow Cytometry (Intracellular) - Anti-SFT antibody [EPR13000(B)] (ab176561)

SFT Flow Cytometry (Intracellular) staining using rabbit Anti-SFT antibody

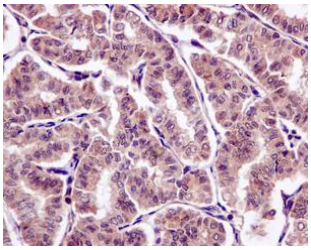
Intracellular Flow Cytometry analysis of permeabilized Jurkat cells labeling SFT (red) with ab176561 at a 1/10 dilution, or negative control rabbit IgG (green)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFT antibody [EPR13000(B)] (ab176561)

SFT Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SFT antibody

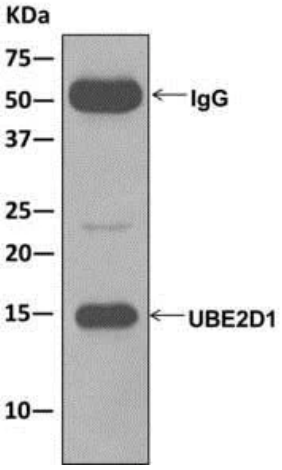
Immunohistochemical analysis of formalin-fixed, paraffin-embedded, Human prostate tissue labeling SFT with ab176561 at a 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFT antibody [EPR13000(B)] (ab176561)

SFT Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SFT antibody

Immunohistochemical analysis of formalin-fixed, paraffin-embedded, Human thyroid gland carcinoma tissue labeling SFT with ab176561 at a 1/50 dilution.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

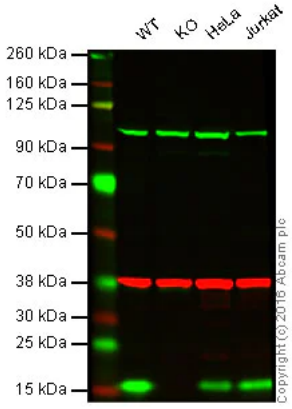


Immunoprecipitation - Anti-SFT antibody [EPR13000(B)] (ab176561)

Western blot analysis on immunoprecipitation pellet from Human skeletal muscle lysate labeling SFT with ab176561 at 1/10 dilution.
All lanes:
Immunoprecipitation - Anti-SFT antibody [EPR13000(B)] (ab176561)

Developed using the ECL technique.

Predicted band size: 17 kDa

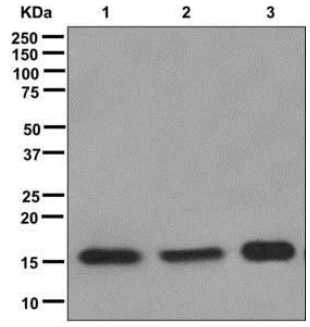


Western blot - Anti-SFT antibody [EPR13000(B)] (ab176561)

SFT Western blot staining using rabbit Anti-SFT antibody

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: SFT knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: Jurkat cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab176561 observed at 18 kDa. Red - loading control, ab181602, observed at 37 kDa. ab176561 was shown to recognize SFT when SFT knockout samples were used, along with additional cross-reactive bands. Wild-type and SFT knockout samples were subjected to SDS-PAGE. ab176561 and ab181602 (loading control to GAPDH) were diluted 1 µg/mL and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Mouse IgG H&L (IRDye® 800CW) preadsorbed (ab216772) and Goat Anti-Rabbit IgG H&L (IRDye® 680RD) preadsorbed (ab216777) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.
All lanes:
Western blot - Anti-SFT antibody [EPR13000(B)] (ab176561)

Predicted band size: 17 kDa



Western blot - Anti-SFT antibody [EPR13000(B)] (ab176561)

All lanes:
Western blot - Anti-SFT antibody [EPR13000(B)] (ab176561) at 1/10000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
Raji cell lysate at 10 µg

Lane 3:
Human skeletal muscle lysate at 10 µg

Developed using the ECL technique.

Predicted band size: 17 kDa

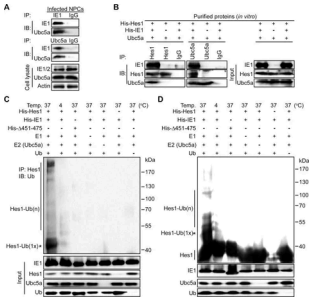


Image collected and cropped by CiteAb under a CC-BY license from the publication

Western blot - Anti-SFT antibody [EPR13000(B)] (ab176561)

SFT western blot using anti-SFT antibody [EPR13000(B)] ab176561. Publication image and figure legend from Liu, X. J., Yang, B., et al., 2017, PLoS Pathog, PubMed 28750047.

ab176561 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab176561 please see the product overview.

IE1 assembles a Hes1 ubiquitination complex and leads to ubiquitination of Hes1 in vitro.(A) Interaction between IE1 and Ubc5a in HCMV infected NPCs. NPCs were infected with HCMV at an MOI of 3, and harvested at 12hpi. Cell lysates were subjected to IE1- or Ubc5a-directed IP followed by IB against IE1 and Ubc5a. Normal IgG was applied as the nonspecific antibody control. (B) Effect of IE1 on assembling the Hes1 and Ubc5a ubiquitination complex. The purified His-Hes1 (1µg) was mixed with Ubc5a (1µg) in the presence or absence of purified His-IE1 (1µg). The mixtures were then subjected to Hes1- or Ubc5a-directed IP, followed by IB for the indicated component proteins. Normal IgG was applied as the nonspecific antibody control. The input components in the reaction were examined. (C-D) Effect of IE1 AA451-475 on ubiquitination of Hes1 in vitro. Purified His-tagged proteins (His-Hes1, His-IE1, His-Δ451–475) were mixed with ubiquitin-activating enzyme (E1), ubiquitin-conjugating enzyme Ubc5a (E2) and ubiquitin as described in Materials and Methods, and then incubated at the indicated temperature for 2 h to perform the in vitro ubiquitination reaction. The mixtures were subjected to Hes1-directed IP and subsequent IB for ubiquitin (Ub) (C). Alternatively, the products from in vitro ubiquitination reactions were directly subjected to IB with anti-Hes1 (D). According to protein size, mono-ubiquitinated Hes1 is indicated by an asterisk (*). The input components in the reaction were examined, and the indicated proteins are shown.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.