abcam

ab109002

Anti-RSF1 antibody [EPR3749(2)]

Recombinant | RabMAb

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	EPR3749(2)
Purification technique	Affinity purification Protein A
Concentration	0.877 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/1000
Notes	Antigen retrieval is recommended. **For unpurified use at 1/250- 1/500.**

Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	**For unpurified use at 1/500-1/1000.**

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/80
Notes	-

Target data

See full target information RSF1

Function Regulatory subunit of the ATP-dependent RSF-1 and RSF-5 ISWI chromatin-remodeling complexes, which form ordered nucleosome arrays on chromatin and facilitate access to DNA during DNA-templated processes such as DNA replication, transcription, and repair (PubMed:12972596, PubMed:28801535). Binds to core histones together with SMARCA5, and is required for the assembly of regular nucleosome arrays by the RSF-5 ISWI chromatin-remodeling complex (PubMed:12972596). Directly stimulates the ATPase activity of SMARCA1 and SMARCA5 in the RSF-1 and RSF-5 ISWI chromatin-remodeling complexes, respectively (PubMed:28801535). The RSF-1 ISWI chromatin remodeling complex has a lower ATP hydrolysis rate than the RSF-5 ISWI chromatin-remodeling complex (PubMed:28801535). The complexes do not have the ability to slide

mononucleosomes to the center of a DNA template (PubMed:28801535). Facilitates transcription of hepatitis B virus (HBV) genes by the pX transcription activator. In case of infection by HBV, together with pX, it represses TNF induced NF-kappa-B transcription activation. Represses transcription when artificially recruited to chromatin by fusion to a heterogeneous DNA binding domain (PubMed:11788598, PubMed:11944984).

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

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	RSF1 also known as Remodeler of Structure of Chromatin 1 is a member of the ATP-dependent chromatin remodeling factors. It has a molecular mass of around 159 kDa. This protein plays a role in altering chromatin architecture by facilitating nucleosome sliding and positioning which is essential for transcriptional regulation. RSF1 expresses in various human tissues particularly in proliferating cells where it assists in regulating gene expression important for cell cycle progression.
Biological function summary	RSF1 participates in cell division and DNA repair processes functioning as part of the RSF complex. This complex along with other chromatin remodelers alters chromatin structure to allow access to DNA. Such mechanisms are critical for allowing correct transcriptional responses during the cell cycle and in response to DNA damage. By modulating nucleosome positioning RSF1 influences the accessibility of transcription factors and other DNA-binding proteins to chromatin.
Pathways	RSF1 involves in the transcriptional regulation and DNA repair pathways. It interacts with proteins like SNF2h within the RSF complex. This interaction is necessary to execute its roles effectively in chromatin remodeling. The involvement of RSF1 in signal transduction pathways also links to the regulation of cell proliferation and survival demonstrating its importance in maintaining cellular homeostasis.
Associated diseases and disorders	RSF1 associates with cancer development and progression including ovarian and liver carcinoma. Overexpression or mutations within the RSF1 gene can lead to oncogenic transformation supporting tumor growth and metastasis. RSF1's association with other proteins such as key regulators in cancer pathways like p53 indicates its significant role in tumor biology. Understanding its function can provide insights into targeted therapies for cancers involving aberrant RSF1 activity.

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

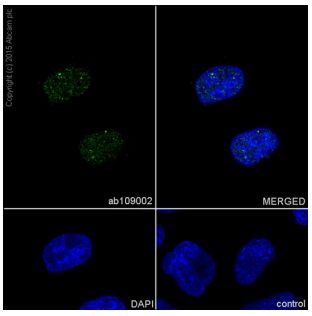
We do not recommend this combination. It is not covered by our product promise.

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.

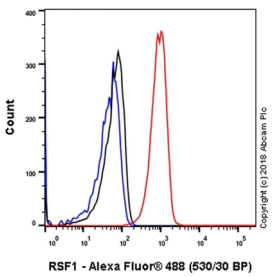
6 product images



Immunocytochemistry/ Immunofluorescence - Anti-RSF1 antibody [EPR3749(2)] (ab109002)

RSF1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-RSF1 antibody

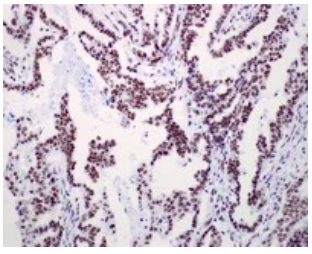
Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling RSF1 with Purified ab109002 at 1:100 (8.7 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-RSF1 antibody [EPR3749(2)] (ab109002)

RSF1 Flow Cytometry (Intracellular) staining using rabbit Anti-RSF1 antibody

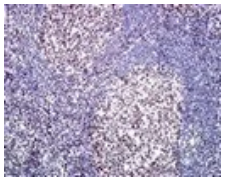
Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling RSF1 with purified ab109002 at 1/80 dilution (10 µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluor® 488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RSF1 antibody [EPR3749(2)] (ab109002)

RSF1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RSF1 antibody

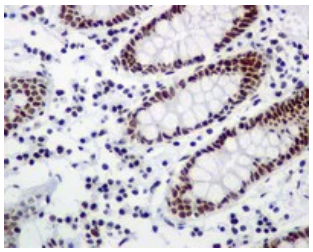
Paraffin-embedded human endometrial adenocarcinoma tissue stained for RSF1 with ab109002 (unpurified) at a 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RSF1 antibody [EPR3749(2)] (ab109002)

RSF1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RSF1 antibody

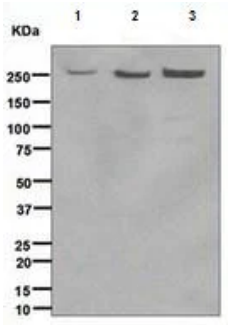
Paraffin-embedded human tonsil tissue stained for RSF1 with ab109002 (unpurified) at a 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RSF1 antibody [EPR3749(2)] (ab109002)

RSF1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-RSF1 antibody

Paraffin-embedded human colon tissue stained for RSF1 with ab109002 (unpurified) at a 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-RSF1 antibody [EPR3749(2)] (ab109002)

All lanes:
Western blot - Anti-RSF1 antibody [EPR3749(2)] (ab109002) at 1/1000 dilution

Lane 1:
Jurkat (Human T cell leukemia cell line from peripheral blood) cell lysate at 10 µg

Lane 2:
HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cell lysate at 10 µg

Lane 3:
HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate at 10 µg

Predicted band size: 163 kDa

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