abcam

ab250646

Anti-Scc4 antibody [EPR14390] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR14390
Purification technique	Affinity purification Protein A
Concentration	0.995 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Target data

See full target information MAU2

Function	Plays an important role in the loading of the cohesin complex on to DNA. Forms a heterodimeric complex (also known as cohesin loading complex) with NIPBL/SCC2 which mediates the loading of the cohesin complex onto chromatin (PubMed:22628566, PubMed:28167679). Plays a role in sister chromatid cohesion

and normal progression through prometaphase (PubMed:16682347, PubMed:16802858).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab250646 is the carrier-free version of ab183033.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	Scc4 also known as STAG2 or SCC4 is a subunit of the cohesion complex loading onto chromosomes during the cell division. It has a molecular weight of around 92 kDa. Scc4 is mainly expressed in the nucleoplasm and interacts with other cohesion subunits to help establish sister chromatid cohesion. It forms a complex with other proteins to ensure correct chromosome segregation which is an important process for maintaining genome stability.
Biological function summary	Scc4 plays a role in chromosomal dynamics and is part of the cohesion loader complex which includes Scc2. Scc4's main function involves facilitating the loading and stabilization of the cohesin complex on chromosomes during the S-phase of the cell cycle. Successfully forming the cohesion structure enables physical connection of sister chromatids ensuring they divide properly. This is important for genetic information to pass accurately from cell generation to generation.
Pathways	Scc4 is mostly involved in cell cycle regulation engaging especially in the pathways tied to chromosome segregation and DNA repair. The complex it forms with Scc2 is critical to load cohesins onto chromatin during DNA replication influencing other proteins like Scc1 and Rad21. These proteins coordinate cohesin activity and interaction in the DNA damage repair mechanisms alongside chromosome segregation processes.
Associated diseases and disorders	Mutations in Scc4's gene have been linked to Cornelia de Lange Syndrome and certain forms of cancer especially acute myeloid leukemia. Its dysfunction can lead to improper chromosomal segregation and mutagenesis contributing to cancer development. The relationship between Scc4 and SMC3 or NIPBL other components of the cohesion complex highlights the interconnectedness of these proteins in both genetic stability and disease pathogenesis.

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

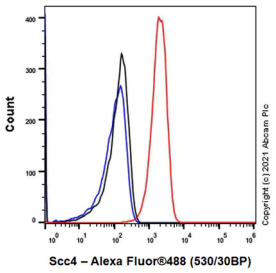
We do not recommend this combination. It is not covered by our product promise.

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.

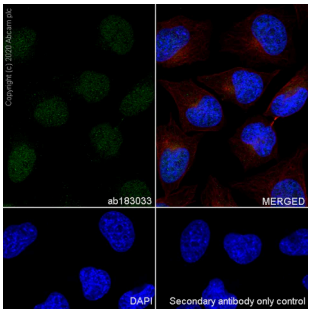
4 product images



Flow Cytometry (Intracellular) - Anti-Scc4 antibody [EPR14390] - BSA and Azide free (ab250646)

Scc4 Flow Cytometry (Intracellular) staining using rabbit Anti-Scc4 antibody

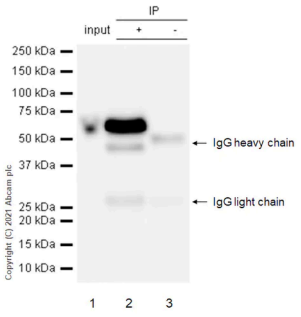
This data was developed using ab183033, the same antibody clone in a different buffer formulation. Intracellular Flow Cytometry analysis of MCF7 (Human breast adenocarcinoma epithelial cell) cells labelling Scc4 with purified ab183033 at 1/50 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde 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).



Immunocytochemistry/ Immunofluorescence - Anti-Scc4 antibody [EPR14390] - BSA and Azide free (ab250646)

Scc4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Scc4 antibody

This data was developed using ab183033, the same antibody clone in a different buffer formulation.
Immunocytochemistry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling Scc4 with purified ab183033 at 1/100 dilution (1.0 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.

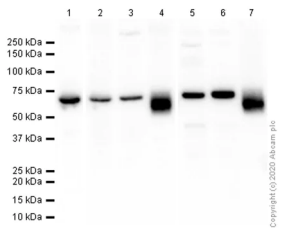


Immunoprecipitation - Anti-Scc4 antibody [EPR14390] - BSA and Azide free (ab250646)

This data was developed using ab183033, the same antibody clone in a different buffer formulation.
Purified ab183033 at 1/30 dilution (2µg) immunoprecipitating Scc4 in HeLa whole cell lysate.
Lane 1 (input): HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10µg.
Lane 2 (+): ab183033 + HeLa whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab183033 in HeLa whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-Scc4 antibody [EPR14390] (ab183033)

Predicted band size: 69 kDa

Observed band size: 69 kDa



Western blot - Anti-Scc4 antibody [EPR14390] - BSA and Azide free (ab250646)

All lanes:
Western blot - Anti-Scc4 antibody [EPR14390] (ab183033) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2:
HT-1080 (Human fibrosarcoma epithelial cell) whole cell lysate

Lane 3:
MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate

Lane 4:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate

Lane 5:
C6 (Rat glial tumor glial cell) whole cell lysate

Lane 6:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate

Lane 7:
RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate

Secondary

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

Predicted band size: 69 kDa

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