abcam

ab251011

Anti-Spa-1 antibody [EPR14134] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR14134
Purification technique	Affinity purification Protein A
Concentration	1.012 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	-

Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Expected

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

ICC/IF

Expected

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

Flow Cyt (Intra)

Expected

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

Target data

See full target information SIPA1

Function	GTPase activator for the nuclear Ras-related regulatory proteins Rap1 and Rap2 in vitro, converting them to the putatively inactive GDP-bound state

(PubMed:9346962). Affects cell cycle progression (By similarity).

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

ab251011 is the carrier-free version of ab189929.

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	Spa-1 also known as human SPA plays a role in the regulation of small GTPase activity specifically targeting Rap1. This protein weighing approximately 120 kDa resides within various tissues with notable expression in the hematopoietic system and neuronal tissues. Researchers use names like Anti-SPA and Anti-Spa when referring to assays designed to recognize this protein. SPA-1 functions as a Rap1 GTPase-activating protein (GAP) facilitating the conversion of active GTP-bound Rap1 to its inactive GDP-bound form.
Biological function summary	Spa-1 engages in the control of cell adhesion and migration through its interaction with the Ras-related protein Rap1. As part of larger signal transduction complexes Spa-1 influences the organization of actin cytoskeleton and impacts integrin-mediated cell adhesion. Through its GAP activity it maintains cellular responsiveness to external stimuli impacting processes like immune cell trafficking and neuronal growth. Studies have noted its significance in maintaining homeostasis in tissues where it is expressed.
Pathways	Spa-1 integrates into key signaling cascades impacting the Ras superfamily of GTPases. Within the Rap1 signaling pathway Spa-1 works alongside proteins like RapGEF to finely regulate signal transduction processes affecting cell adhesion and cytoskeletal dynamics. In the context of the integrin signaling pathway Spa-1 modulates the actions of B-Raf in connection with Rap1 dictating responses necessary for cellular motility and positioning.
Associated diseases and disorders	Spa-1 displays relevance to leukemia and neurological conditions. Its role in negative regulation of Rap1 activity links it to the aberrant proliferation seen in certain leukemia types where altered Rap1 signaling contributes to uncontrolled cell growth. Furthermore disruptions in Spa-1's modulation of neuronal Rap1 activity have associations with neurodegenerative diseases where proper cell migration and adhesion are impaired. Research explores its connections to proteins like BCR-ABL in the context of leukemia highlighting Spa-1 as a therapeutic target in disease management.

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.

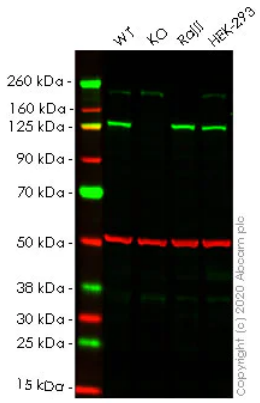
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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1 product image



Western blot - Anti-Spa-1 antibody [EPR14134] - BSA and Azide free (ab251011)

Spa-1 Western blot staining using rabbit Anti-Spa-1 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab189929).
Lanes 1-4: Merged signal (red and green). Green - ab189929 observed at 130 kDa. Red - loading control ab7291 observed at 50 kDa.

ab189929 Anti-Spa-1 antibody [EPR14134] was shown to specifically react with Spa-1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265434 (knockout cell lysate ab258189) was used. Wild-type and Spa-1 knockout samples were subjected to SDS-PAGE. ab189929 and Anti-alpha Tubulin antibody [DM1A] - Loading Control (ab7291) were incubated overnight at 4°C at 1 in 5000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-Spa-1 antibody [EPR14134] (ab189929) at 1/5000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
Spa-1 knockout HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human SIPA1 (Spa-1) knockout HeLa cell line (ab265434)

Lane 3:
Raji cell lysate at 20 µg

Lane 4:
HEK-293 cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 112 kDa

Observed band size: 130 kDa

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