abcam

ab139403

Anti-alpha 1 Spectrin antibody [EPR9300]

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	EPR9300
Purification technique	Affinity purification Protein A
Concentration	0.947 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information SPTA1

Function	Spectrin is the major constituent of the cytoskeletal network underlying the erythrocyte plasma membrane. It associates with band 4.1 and actin to form the cytoskeletal superstructure of the erythrocyte plasma membrane.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

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	Alpha 1 Spectrin also known as SPTA1 is an essential protein that plays a mechanical role in cells. This protein has a large molecular mass of approximately 280 kDa and is predominantly expressed in erythrocytes but it is also found in other cell types. Structurally it forms part of the spectrin family which includes alpha and beta spectrin subunits. Alpha 1 Spectrin interacts with the actin cytoskeleton creating a network that supports the plasma membrane's integrity and flexibility.
Biological function summary	Alpha 1 Spectrin binds with other proteins to form a spectrin-actin complex that is essential for maintaining cell shape and mechanical stability. It interacts with ankyrin and other components of the cytoskeleton to provide the necessary elasticity and durability to cells especially red blood cells. This protein makes sure

	that the cytoskeletal network remains stable and efficiently responds to mechanical stresses from the outside environment.
Pathways	Alpha 1 Spectrin is involved in critical pathways important for cellular functions. It participates in the erythrocyte cytoskeleton organization pathway interacting with proteins such as ankyrin and protein 4.1R. These interactions influence cell deformability and help maintain the biconcave shape of red blood cells allowing them to navigate through narrow capillaries effectively. Alpha 1 Spectrin's functionality ensures efficient oxygen delivery throughout the body by maintaining red blood cell integrity.
Associated diseases and disorders	Mutations or deficiencies in Alpha 1 Spectrin can lead to conditions such as hereditary spherocytosis and elliptocytosis. These disorders are characterized by hemolytic anemia and are linked to disruptions in the cytoskeleton structure and function of erythrocytes. In these cases Alpha 1 Spectrin can display abnormal interactions with related proteins like ankyrin leading to compromised membrane stability and shortened red blood cell lifespan. The understanding of Alpha 1 Spectrin's role in these diseases provides insight into potential therapeutic targets for managing these disorders.

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

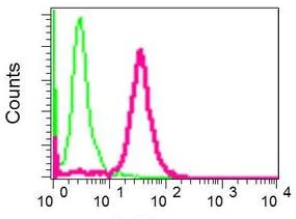
We do not recommend this combination. It is not covered by our product promise.

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.

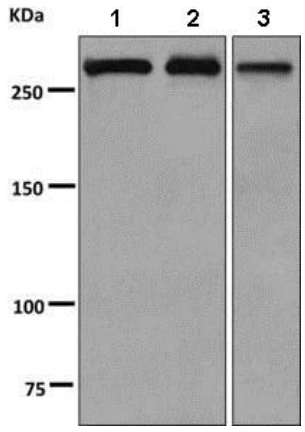
2 product images



Flow Cytometry (Intracellular) - Anti-alpha 1 Spectrin antibody [EPR9300] (ab139403)

Alpha 1 Spectrin Flow Cytometry (Intracellular) staining using rabbit Anti-alpha 1 Spectrin antibody

Intracellular flow cytometric analysis of permeabilized K562 cells labelling alpha 1 Spectrin with ab139403 at 1/100 dilution (red) or a rabbit IgG (negative) (green).



Western blot - Anti-alpha 1 Spectrin antibody [EPR9300] (ab139403)

All lanes:
Western blot - Anti-alpha 1 Spectrin antibody [EPR9300] (ab139403) at 1/1000 dilution

Lane 1:
K562 lysate at 10 µg

Lane 2:
Human fetal heart lysate at 10 µg

Lane 3:
Human fetal liver lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 280 kDa

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