abcam

ab171943

Anti-SGSM1/RUTBC2 antibody [EPR11563]

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	EPR11563
Purification technique	Affinity purification Protein A
Concentration	0.461 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	-

IHC

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/5000
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	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.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information SGSM1

Function	Interacts with numerous Rab family members, functioning as Rab effector for some, and as GTPase activator for others. Promotes GTP hydrolysis by RAB34 and RAB36. Probably functions as a GTPase effector with RAB9A and RAB9B; does not stimulate GTP hydrolysis with RAB9A and RAB9B.

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	SGSM1 also known as RUTBC2 serves as a Rab GTPase-activating protein. It has a mass of approximately 109 kDa. This protein interacts with small GTPases of the Rab family which are pivotal in intracellular vesicle trafficking. SGSM1/RUTBC2 catalyzes the hydrolysis of GTP to GDP on Rab proteins. This activity impacts the regulation of vesicular transport processes. SGSM1/RUTBC2 expression is seen in various tissues indicating its functional diversity.
Biological function summary	SGSM1/RUTBC2 modulates vesicular trafficking and membrane dynamics. It is not part of a large complex but acts as a solitary enzyme influencing membrane trafficking by its interaction with Rabs. Specifically it regulates endocytic and exocytic pathways. Rabs act as molecular switches cycling between active GTP-bound and inactive GDP-bound states and SGSM1 helps facilitate this conversion impacting cellular transport and membrane dynamics.
Pathways	SGSM1/RUTBC2 plays a significant role in endocytic recycling and autophagy pathways. It interacts with Rab7 an important player in the late endocytic pathway and Rab32 integral to lysosomal function. Through mediating the activity of these Rabs SGSM1 influences the trafficking and recycling of membrane proteins and can affect a generation of autophagosomes. This regulation ensures correct cargo delivery and recycling maintaining cellular homeostasis.
Associated diseases and disorders	SGSM1/RUTBC2 has been associated with neurodegenerative conditions and cancer. Alterations in its expression or function could contribute to improper vesicular transport impacting cellular health and homeostasis. In Alzheimer's disease dysfunctions of Rab activity influenced by SGSM1 have been noted. Additionally its link to Rab7 suggests a potential involvement in cancer progression as Rab7 dysregulation can affect tumor cell migration and metastasis. Understanding SGSM1 interactions provides insights into these pathologies potentially offering therapeutic targets.

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

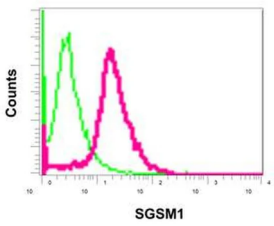
We do not recommend this combination. It is not covered by our product promise.

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.

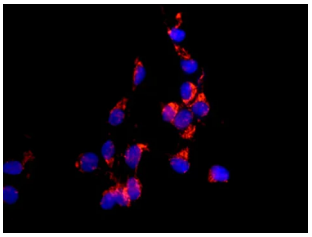
3 product images



Flow Cytometry (Intracellular) - Anti-SGSM1/RUTBC2 antibody [EPR11563] (ab171943)

SGSM1/RUTBC2 Flow Cytometry (Intracellular) staining using rabbit Anti-SGSM1/RUTBC2 antibody

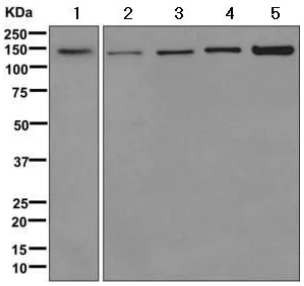
Intracellular flow cytometric analysis of permeabilized 293T cellslabelling SGSM1/RUTBC2 with ab171943 at 1/10 (red) or a rabbit IgG (negative) (green).



Immunocytochemistry/ Immunofluorescence - Anti-SGSM1/RUTBC2 antibody [EPR11563] (ab171943)

SGSM1/RUTBC2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SGSM1/RUTBC2 antibody

Immunofluorescent analysis of 293T cells labeling SGSM1/RUTBC2 with ab171943 at 1/100 (red). DAPI nuclear staining (blue).



Western blot - Anti-SGSM1/RUTBC2 antibody [EPR11563] (ab171943)

SGSM1/RUTBC2 Western blot staining using rabbit Anti-SGSM1/RUTBC2 antibody

All lanes:
Western blot - Anti-SGSM1/RUTBC2 antibody [EPR11563] (ab171943) at 1/1000 dilution

Lane 1:
Human fetal brain tissue lysate at 10 µg

Lane 2:
Human fetal kidney tissue lysate at 10 µg

Lane 3:
Human fetal heart tissue lysate at 10 µg

Lane 4:
U-87 MG (Human glioblastoma-astrocytoma epithelial cell line) cell lysate at 10 µg

Lane 5:
293T (Human embryonic kidney epithelial cell) cell lysate at 10 µg

Developed using the ECL technique.

Predicted band size: 129 kDa

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