abcam

ab191399

Anti-RRAS antibody [EPR15843]

Recombinant | RabMAb | KO Validated

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	EPR15843
Purification technique	Affinity purification Protein A
Concentration	1.783 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/350
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information Ras-related protein R-Ras

Function	GTP-binding protein with GTPase activity, likely involved in the regulation of MAPK signaling pathway and thereby controlling multiple cellular processes (PubMed:39809765). Regulates the organization of the actin cytoskeleton (PubMed:16537651, PubMed:18270267). With OSPBL3, modulates integrin beta-1 (ITGB1) activity (PubMed:18270267).

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	RRAS also known as Ras-related protein R-Ras is a small GTPase with a molecular mass of approximately 23 kDa. This protein belongs to the Ras superfamily and plays a central role in transducing signals from cell membrane receptors to intracellular signaling pathways. RRAS is ubiquitously expressed in numerous tissues including the brain muscle and various hematopoietic lineages. It functions as a molecular switch cycling between an inactive GDP-bound state and an active GTP-bound state regulating diverse cellular processes.
Biological function summary	This protein regulates processes such as cell proliferation differentiation and survival. It does not form part of a larger protein complex but interacts with a range of signaling proteins to exert its effects. RRAS influences the behavior of cells through the control of integrin activation and cell adhesion impacting immune system functions and neural activities. It holds significant roles in modulating vascular smooth muscle cell function as well contributing to the regulation of blood vessel dynamics.
Pathways	RRAS plays a role in the PI3K-AKT and MAPK signaling pathways. These pathways are significant in controlling cell growth survival and metabolism. Within these pathways RRAS interacts with proteins like PI3K which subsequently activates AKT and with RAF which further engages MAPK. These interactions position RRAS as an influential intermediary affecting downstream intracellular events that are important for cellular responses to external stimuli.
Associated diseases and disorders	RRAS has relevance in oncogenesis and cardiovascular conditions. Mutations or altered expressions of RRAS relate to cancer due to its impact on cell proliferation and survival often involving interactions with the well-studied RAS oncogene. Additionally due to its role in the control of vascular smooth muscle cells and blood vessel formation RRAS contributes to pathologies such as arteriosclerosis. These associations highlight the importance of RRAS in both tumorigenic processes and vascular disease mechanisms.

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.

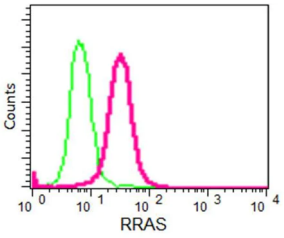
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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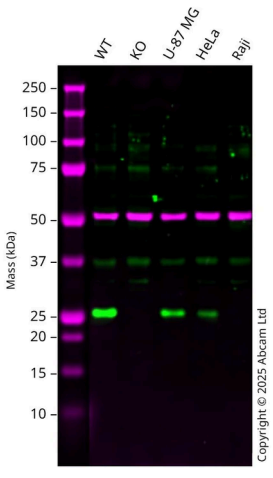
4 product images



Flow Cytometry (Intracellular) - Anti-RRAS antibody [EPR15843] (ab191399)

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

Intracellular Flow Cytometry analysis of paraformaldehyde-fixed A549 cells labeling RRAS with ab191399 at a 1/350 dilution and secondary antibody goat anti-rabbit IgG (FITC, red) at a 1/150 dilution, or negative control rabbit IgG (green).



Western blot - Anti-RRAS antibody [EPR15843] (ab191399)

RRAS Western blot staining using rabbit Anti-RRAS antibody

Western blot: Anti-RRAS antibody [EPR15843] ab191399 staining at 1/1000 dilution, shown in green; Mouse anti alpha Tubulin (ab7291) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 26 kDa in Wild-type A549 UNBOILED cell lysates with no signal observed at this size in RRAS knockout A549 UNBOILED cell line.

To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
Lanes 1 - 5:
Western blot - Anti-RRAS antibody [EPR15843] (ab191399) at 1/1000 dilution

Lanes 1 - 5:
Western blot - Anti-RRAS antibody [EPR15843] - BSA and Azide free (ab251063) at 1/1000 dilution

Lane 1:
Wild-type A549 UNBOILED at 20 µg

Lane 2:
RRAS knockout A549 UNBOILED at 20 µg

Lane 3:
U-87 MG at 20 µg

Lane 4:
HeLa at 20 µg

Lane 5:
Raji at 20 µg

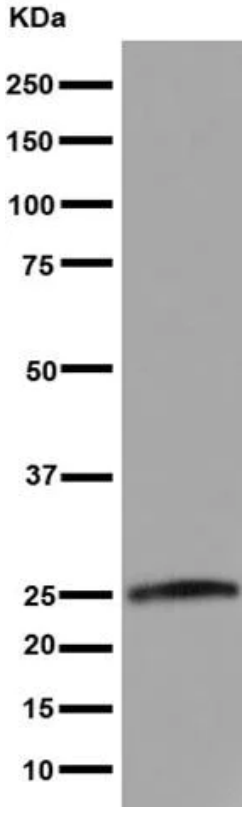
Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 23 kDa

Observed band size: 26 kDa



Western blot - Anti-RRAS antibody [EPR15843] (ab191399)

All lanes:
Western blot - Anti-RRAS antibody [EPR15843] (ab191399) at 1/10000 dilution

All lanes:
A549 cell lysate at 20 µg

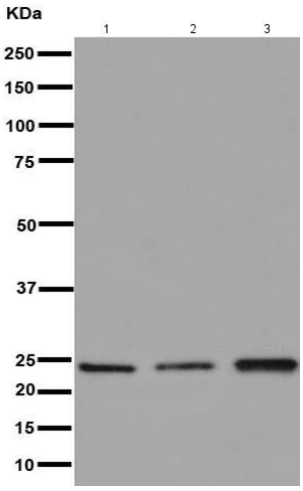
Secondary

All lanes:
goat anti-rabbit IgG, (H+L), peroxidase conjugated at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 23 kDa

Observed band size: 23 kDa



Western blot - Anti-RRAS antibody [EPR15843] (ab191399)

All lanes:
Western blot - Anti-RRAS antibody [EPR15843] (ab191399) at 1/1000 dilution

Lane 1:
Human fetal kidney tissue lysate at 20 µg

Lane 2:
Human fetal heart tissue lysate at 20 µg

Lane 3:
HT29 cell lysate at 20 µg

Secondary

All lanes:
goat anti-rabbit IgG, (H+L), peroxidase conjugated at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 23 kDa

Observed band size: 23 kDa

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