abcam

ab206969

Anti-Ras antibody [EPR18713-13]

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	EPR18713-13
Purification technique	Affinity purification Protein A
Concentration	1.175 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat, Recombinant full length protein - Human
Dilution info	-
Notes	-

WB

Tested

Species	Recombinant full length protein - Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/200
Notes	-

Species	Human
Dilution info	1/200
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/250
Notes	-

Expected

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

Not recommended

Species	Recombinant full length protein - Human
Dilution info	-
Notes	-

Target data

See full target information HRAS

Function	Involved in the activation of Ras protein signal transduction (PubMed:22821884). Ras proteins bind GDP/GTP and possess intrinsic GTPase activity (PubMed:12740440, PubMed:14500341, PubMed:9020151).

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	The Ras protein also known by its alternate names such as KRAS NRAS and HRAS functions as a small GTPase which is a type of enzyme that binds to guanosine triphosphate (GTP) and can switch to an inactive form when it hydrolyzes GTP to GDP. Ras proteins are encoded by genes located in different chromosomes and typically have a molecular weight of about 21 kDa. These proteins are expressed in various tissues throughout the body where they play key roles in cellular signaling.
Biological function summary	Ras proteins are pivotal in regulating cell proliferation differentiation and survival. They are often part of larger protein complexes that facilitate signal transduction across cell membranes. These proteins function as binary molecular switches toggling between active (GTP-bound) and inactive (GDP-bound) states. Mutations in Ras proteins such as NRAS Q61R can lead the protein to assume permanently active conformations disrupting normal cellular signaling processes and contributing to oncogenesis.
Pathways	Ras proteins play significant roles in the MAPK/ERK and PI3K/AKT signaling pathways. Their activation leads to a cascade of phosphorylation events that

	ultimately regulate gene expression. Within these pathways Ras proteins interact with various molecules including RAF kinases and the PI3K protein further illustrating their complex roles in signal propagation. These pathways control many cellular processes including growth differentiation and survival illustrating how Ras proteins integrate multiple signals to modulate cellular outcomes.
Associated diseases and disorders	Ras proteins are frequently implicated in various cancers notably pancreatic and colorectal cancers. Mutated forms of Ras such as KRAS G12V drive oncogenesis by promoting uncontrolled cell growth and division. In cancer pathology Ras often interacts with tumor suppressor proteins influencing the disease progression. Targeting Ras-mediated signaling pathways using approaches like pan-Ras inhibitors or chemiluminescence ELISAs represents an ongoing area of therapeutic research aimed at combating Ras-driven malignancies.

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

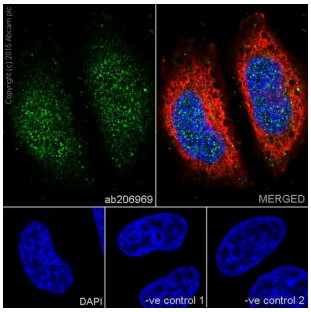
We do not recommend this combination. It is not covered by our product promise.

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.

9 product images



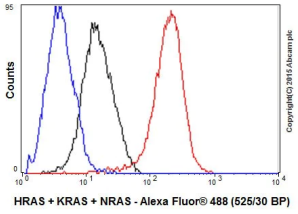
Immunocytochemistry/ Immunofluorescence - Anti-Ras antibody [EPR18713-13] (ab206969)

Ras Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Ras antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling RAS with ab206969 at 1/200 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasm and nuclear staining on HeLa cell line. The nuclear counterstain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:-

-ve control 1: ab206969 at 1/200 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.

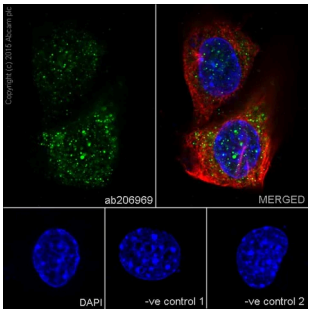
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Ras antibody [EPR18713-13] (ab206969)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling RASwith ab206969 at 1/250 dilution (red) compared with a rabbit monoclonal IgG isotype control (ab172730; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.



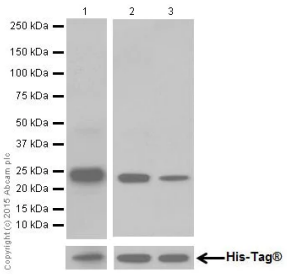
Immunocytochemistry/ Immunofluorescence - Anti-Ras antibody [EPR18713-13] (ab206969)

Ras Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Ras antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embyro fibroblast cells) cells labeling RAS with ab206969 at 1/200 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasm and nuclear staining on NIH/3T3 cells line. The nuclear counterstain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:-

-ve control 1: ab206969 at 1/200 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.

-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Western blot - Anti-Ras antibody [EPR18713-13] (ab206969)

Ras Western blot staining using rabbit Anti-Ras antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: Lane 1: 1 second; Lane 2 and 3: 5 seconds.

Recombinant Human RAS full length protein contains aa1-189 with an N-terminal His-Tag®.
Recombinant Human HRAS full length protein contains aa1-189 with an N-terminal His-Tag®.
Recombinant Human NRAS full length protein contains aa1-189 with an N-terminal His-Tag®. All three recombinant proteins were made in house.

All lanes:
Western blot - Anti-Ras antibody [EPR18713-13] (ab206969) at 1/5000 dilution

Lane 1:
Recombinant Human KRAS full length protein at 0.01 µg

Lane 2:
Recombinant Human HRAS full length protein at 0.01 µg

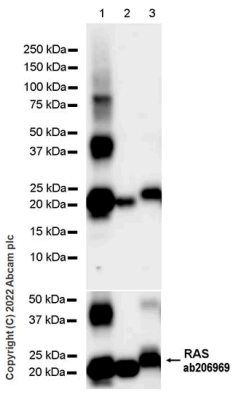
Lane 3:
Recombinant Human NRAS full length protein at 0.01 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 21 kDa

Observed band size: 21 kDa



Western blot - Anti-Ras antibody [EPR18713-13] (ab206969)

Ras Western blot staining using rabbit Anti-Ras antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST. This antibody cross-reacts with human HRAS/NRAS/KRAS. In Western blot, anti-Ras antibody (ab206969) staining at 1/1000 dilution. Exposure time: 26 seconds.
All lanes:
Western blot - Anti-RAS antibody [18/Ras] (ab307738) at 1/1000 dilution

Lane 1:
His-tagged human HRAS recombinant protein at 10 ng

Lane 2:
His-tagged human NRAS recombinant protein at 10 ng

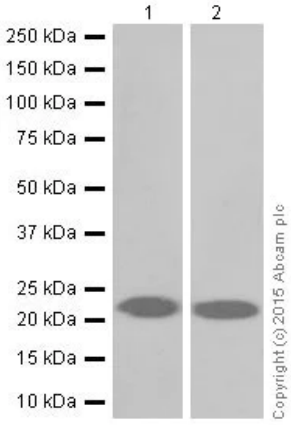
Lane 3:
His-tagged human KRAS recombinant protein at 10 ng

Secondary

All lanes:
Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/10000 dilution

Observed band size: 21 kDa

Exposure time: 26s



Western blot - Anti-Ras antibody [EPR18713-13] (ab206969)

Blocking/Dilution buffer: 5% NFDM/TBST.
Lane 1:
Western blot - Anti-Ras antibody [EPR18713-13] (ab206969) at 1/2000 dilution

Lane 2:
Western blot - Anti-Ras antibody [EPR18713-13] (ab206969) at 1/1000 dilution

Lane 1:
Human fetal brain lysate at 10 µg

Lane 2:
Human fetal kidney lysate at 10 µg

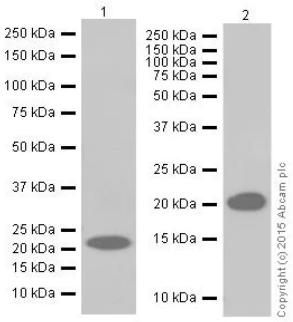
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 21 kDa

Observed band size: 21 kDa

Exposure time: 3min



Western blot - Anti-Ras antibody [EPR18713-13] (ab206969)

Ras Western blot staining using rabbit Anti-Ras antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Ras antibody [EPR18713-13] (ab206969) at 1/1000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 10 µg

Lane 2:
A431 (Human epidermoid carcinoma) whole cell lysate at 10 µg

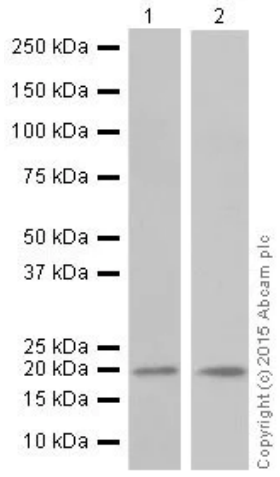
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 21 kDa

Observed band size: 21 kDa

Exposure time: 3min



Western blot - Anti-Ras antibody [EPR18713-13] (ab206969)

Blocking/Dilution buffer: 5% NFDM/TBST.
Lane 1:
Western blot - Anti-Ras antibody [EPR18713-13] (ab206969) at 1/2000 dilution

Lane 2:
Western blot - Anti-Ras antibody [EPR18713-13] (ab206969) at 1/1000 dilution

Lane 1:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

Lane 2:
NIH/3T3 (Mouse embyro fibroblast cells) whole cell lysate at 10 µg

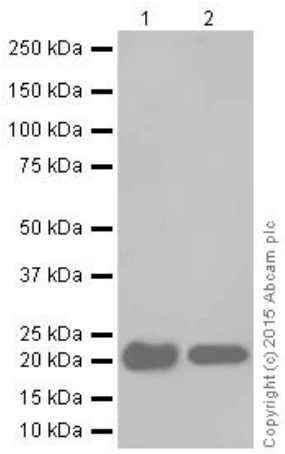
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 21 kDa

Observed band size: 21 kDa

Exposure time: 3min



Western blot - Anti-Ras antibody [EPR18713-13] (ab206969)

Ras Western blot staining using rabbit Anti-Ras antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Ras antibody [EPR18713-13] (ab206969) at 1/2000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Rat brain lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 21 kDa

Observed band size: 21 kDa

Exposure time: 3min

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