abcam

Product datasheet

Anti-IQGAP1 antibody [EPR5220] ab133490

KO VALIDATED Recombinant RabMAb

12 References 6 Images

Overview

Product name	Anti-IQGAP1 antibody [EPR5220]
Description	Rabbit monoclonal [EPR5220] to IQGAP1
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IHC-P, ICC/IF **Unsuitable for:** IP
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	HeLa, 293T, Human placenta, Mouse thymus and F9 cell lysates; Human kidney tissue
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Tissue culture supernatant

Clonality	Monoclonal
Clone number	EPR5220
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab133490 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

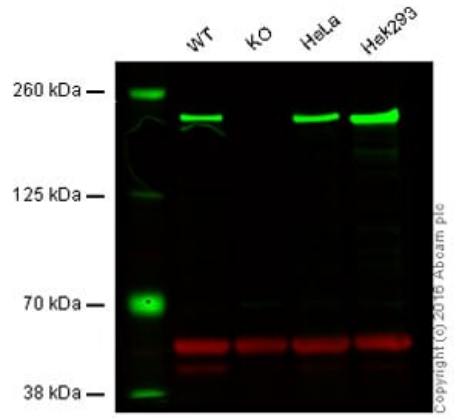
Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000 - 1/10000. Detects a band of approximately 195 kDa (predicted molecular weight: 189 kDa).
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		1/50 - 1/100.

Application notes Is unsuitable for IP.

Target

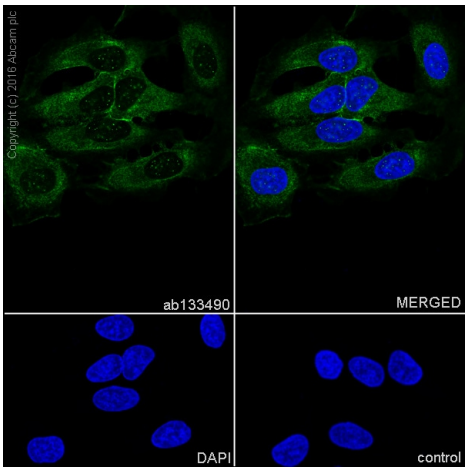
Function	Binds to activated CDC42 but does not stimulate its GTPase activity. It associates with calmodulin. Could serve as an assembly scaffold for the organization of a multimolecular complex that would interface incoming signals to the reorganization of the actin cytoskeleton at the plasma membrane. May promote neurite outgrowth.
Tissue specificity	Expressed in the placenta, lung, and kidney. A lower level expression is seen in the heart, liver, skeletal muscle and pancreas.
Sequence similarities	Contains 1 CH (calponin-homology) domain. Contains 4 IQ domains. Contains 1 Ras-GAP domain. Contains 1 WW domain.
Domain	Regions C1 and C2 can either interact with nucleotide-free CDC42, or interact together, depending on the phosphorylation state of Ser-1443. When Ser-1443 is not phosphorylated, C1 and C2 interact, which prevents binding of nucleotide-free CDC42 and promotes binding of GTP-bound CDC42. Phosphorylation of Ser-1443 prevents interaction between C1 and C2, which opens the structure of the C-terminus and allows binding and sequestration of nucleotide-free CDC42 on both C1 and C2.
Post-translational modifications	Phosphorylation of Ser-1443 by PKC prevents interaction between C1 and C2, allowing binding of nucleotide-free CDC42. Ser-1443 phosphorylation enhances the ability to promote neurite outgrowth.
Cellular localization	Cell membrane.

Images



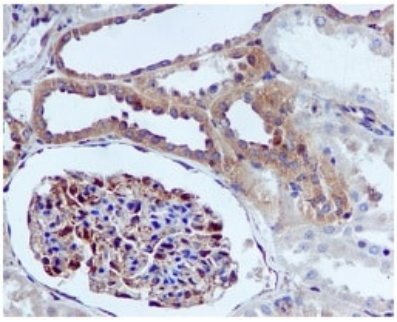
Western blot - Anti-IQGAP1 antibody [EPR5220] (ab133490)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: IQGAP knockout HAP1 cell lysate (20 µg)
Lane 3: HeLa cell lysate (20 µg)
Lane 4: HEK293 cell lysate (20 µg)
Lanes 1 - 4: Merged signal (red and green). Green - ab133490 observed at 190 kDa. Red - loading control, **ab7291**, observed at 52 kDa.
ab133490 was shown to specifically react with IQGAP1 when IQGAP1 knockout samples were used. Wild-type and IQGAP1 knockout samples were subjected to SDS-PAGE. ab133490 and **ab7291** (loading control to alpha tubulin) were diluted 1/1000 and 1/2000 and incubated overnight at 4°C. 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 1/10 000 dilution for 1 h at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-IQGAP1 antibody [EPR5220] (ab133490)

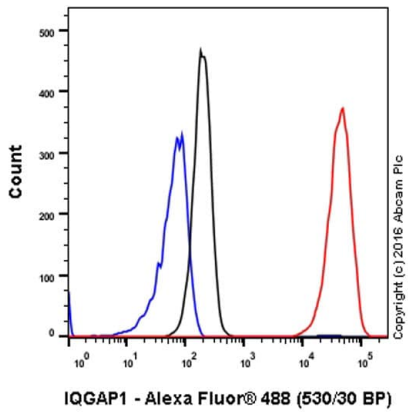
Immunocytochemistry/Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labeling IQGAP1 with Purified ab133490 at 1/500 dilution (5 µg/ml). Cells were fixed with 100% methanol. **ab150077** Goat anti rabbit IgG(Alexa Fluor® 488) at 1/1000 dilution was used as the secondary antibody. Nuclei were counterstained with DAPI. PBS was used instead of the primary antibody as the negative control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-IQGAP1 antibody [EPR5220] (ab133490)

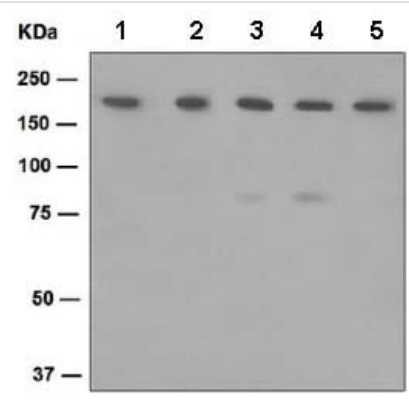
Immunohistochemical analysis of IQGAP1 in paraffin embedded Human kidney tissue, using ab133490 at a dilution of 1/100.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-IQGAP1 antibody [EPR5220] (ab133490)

Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling IQGAP1 with unpurified ab133490 at 1/20 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.



Western blot - Anti-IQGAP1 antibody [EPR5220] (ab133490)

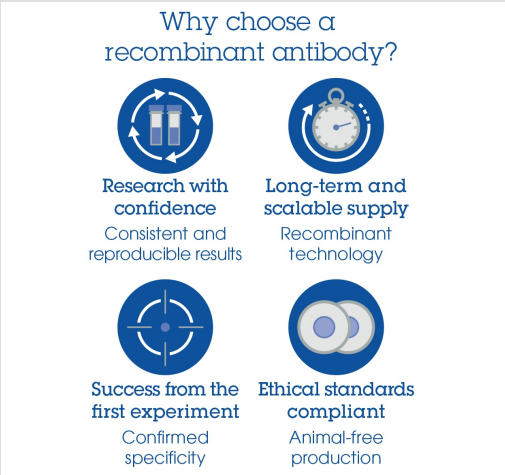
All lanes : Anti-IQGAP1 antibody [EPR5220] (ab133490) at 1/1000 dilution

Lane 1 : HeLa cell lysate
Lane 2 : 293T cell lysate
Lane 3 : Human placenta lysate
Lane 4 : Mouse thymus lysate
Lane 5 : F9 cell lysate

Lysates/proteins at 10 µg per lane.

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

Predicted band size: 189 kDa
Observed band size: 195 kDa



Anti-IQGAP1 antibody [EPR5220] (ab133490)

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