abcam

Product datasheet

Anti-RAP1/TERF2IP antibody [4c8/1] ab14404

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Overview

Product name	Anti-RAP1/TERF2IP antibody [4c8/1]
Description	Mouse monoclonal [4c8/1] to RAP1/TERF2IP
Host species	Mouse
Tested applications	**Suitable for:** IP, WB, Flow Cyt
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length protein corresponding to Human RAP1/TERF2IP.
Positive control	In Western Blot, this antibody gave a positive signal in the following whole cell lysates: HeLa; HEK293; HepG2; A431.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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 or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium azide Constituent: 99.98% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	4c8/1
Myeloma	Sp2/0-Ag14
Isotype	IgG2b

Applications

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab14404 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
IP		Use a concentration of 5 µg/ml.
WB	★★★★★ (2)	Use at an assay dependent concentration. Predicted molecular weight: 36 kDa.
Flow Cyt		Use 1µg for 10^6 cells. **ab91366** - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody. **ab170192** - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Target

Function Acts both as a regulator of telomere function and as a transcription regulator. Involved in the regulation of telomere length and protection as a component of the shelterin complex (telosome). In contrast to other components of the shelterin complex, it is dispensible for telomere capping and does not participate in the protection of telomeres against non-homologous end-joining (NHEJ)-mediated repair. Instead, it is required to negatively regulate telomere recombination and is essential for repressing homology-directed repair (HDR), which can affect telomere length. Does not bind DNA directly: recruited to telomeric double-stranded 5'-TTAGGG-3' repeats via its interaction with TERF2. Independently of its function in telomeres, also acts as a transcription regulator: recruited to extratelomeric 5'-TTAGGG-3' sites via its association with TERF2 or other factors, and regulates gene expression. When cytoplasmic, associates with the I-kappa-B-kinase (IKK) complex and acts as a regulator of the NF-kappa-B signaling by promoting IKK-mediated phosphorylation of RELA/p65, leading to activate expression of NF-kappa-B target genes.

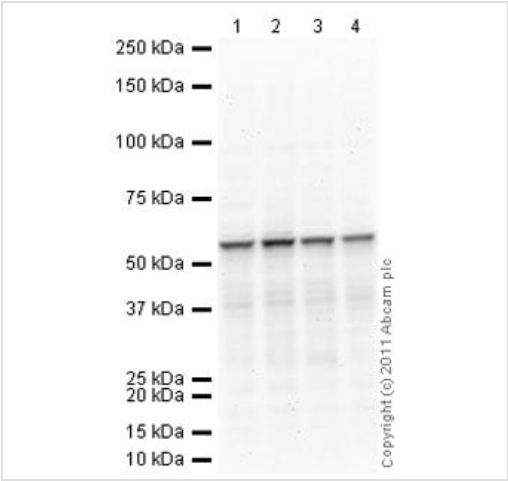
Tissue specificity Ubiquitous. Highly expressed.

Sequence similarities Belongs to the RAP1 family.
Contains 1 BRCT domain.
Contains 1 Myb-like domain.

Post-translational modifications Phosphorylated upon DNA damage, probably by ATM or ATR.

Cellular localization Nucleus. Cytoplasm. Chromosome. Chromosome > telomere. Associates with chromosomes, both at telomeres and in extratelomeric sites. Also exists as a cytoplasmic form, where it associates with the IKK complex.

Images



Western blot - Anti-RAP1/TERF2IP antibody [4c8/1] (ab14404)

All lanes : Anti-RAP1/TERF2IP antibody [4c8/1] (ab14404) at 5 µg/ml

Lane 1 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate
Lane 2 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate
Lane 3 : HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate
Lane 4 : A431 (Human epithelial carcinoma cell line) Whole Cell Lysate

Lysates/proteins at 20 µg per lane.

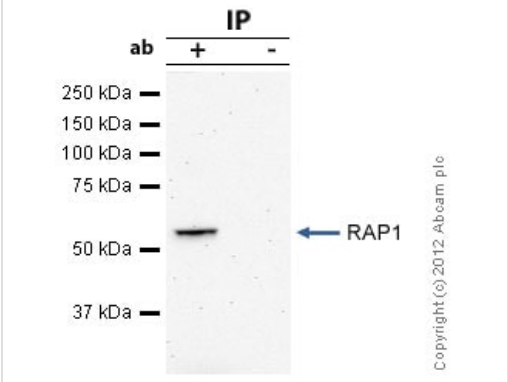
Secondary
All lanes : Goat polyclonal Secondary Antibody to Mouse IgG - H&L (HRP), pre-adsorbed at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 36 kDa
Observed band size: 55 kDa

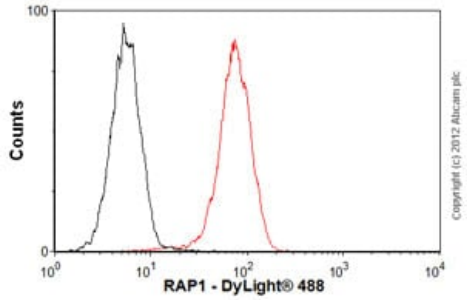
Exposure time: 8 minutes



Immunoprecipitation - Anti-RAP1/TERF2IP antibody [4c8/1] (ab14404)

RAP1 was immunoprecipitated using 0.5mg Hela whole cell extract, 5µg of Mouse monoclonal to RAP1/TERF2IP RITM0035008 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, Hela whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.
Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70^{o}C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab14404.
Secondary: Goat polyclonal to mouse IgG light chain specific (HRP)

at 1/5000 dilution.
Band: 55kDa; RAP1



Flow Cytometry - Anti-RAP1/TERF2IP antibody [4c8/1] (ab14404)

Overlay histogram showing HeLa cells stained with ab14404 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab14404, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG2b [PLPV219] (**ab91366**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.

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