abcam

ab2175

Anti-RPA32/RPA2 antibody [9H8]

Anti-RPA32/RPA2 antibody [9H8] (ab2175) is a mouse monoclonal antibody detecting RPA32/RPA2 in **Western Blot, Flow Cytometry, IHC-P**. Suitable for **Human**.

- Over 230 publications
- Trusted since 2002

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 - 7.5 Preservative: 0.05% Sodium azide Constituents: 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human RPA2. Database link P15927
Clone number	9H8
Purity	IgG fraction
Light chain type	kappa
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information RPA2

Function	As part of the heterotrimeric replication protein A complex (RPA/RP-A), binds and stabilizes single-stranded DNA intermediates that form during DNA replication or upon DNA stress. It prevents their reannealing and in parallel, recruits and activates different proteins and complexes involved in DNA metabolism. Thereby, it plays an essential role both in DNA replication and the cellular response to DNA damage. In the cellular response to DNA damage, the RPA complex controls DNA repair and DNA damage checkpoint activation. Through recruitment of ATRIP activates the ATR kinase a master regulator of the DNA damage response. It is required for the recruitment of the DNA double-strand break repair factors RAD51 and RAD52 to chromatin in response to DNA damage. Also recruits to sites of DNA damage proteins like XPA and XPG that are involved in nucleotide excision repair and is required for this mechanism of DNA repair. Also plays a role in base excision repair (BER) probably through interaction with UNG. Also recruits SMARCAL1/HARP, which is involved in replication fork restart, to sites of DNA damage. May also play a role in telomere maintenance. RPA stimulates 5'-3' helicase activity of BRIP1/FANCJ (PubMed:17596542).

Storage

Shipped at conditions	Blue Ice
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

Product Specifications
Anti-RPA32/RPA2 antibody [9H8] (ab2175) is a mouse monoclonal antibody and is validated for use in Flow Cyt, IHC-P, WB in human samples.
Anti-RPA32/RPA2 antibody [9H8] (ab2175) specifically detects RPA32/RPA2 (UniProt ID: P15927; Molecular weight: 29kDa) and is sold in 500µL selling sizes.

Quality and Validation
Abcam's high quality validation processes ensure Anti-RPA32/RPA2 antibody [9H8] (ab2175) has high sensitivity and specificity.
Anti-RPA32/RPA2 antibody [9H8] (ab2175) has been cited over 236 times in peer reviewed journals and is trusted by the scientific community.
Anti-RPA32/RPA2 antibody [9H8] (ab2175) has 11 independent reviews from customers.

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

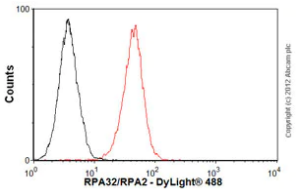
We do not recommend this combination. It is not covered by our product promise.

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.

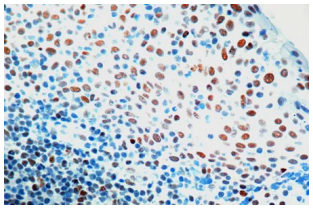
5 product images



Flow Cytometry - Anti-RPA32/RPA2 antibody [9H8] (ab2175)

RPA32/RPA2 Flow Cytometry staining using mouse Anti-RPA32/RPA2 antibody

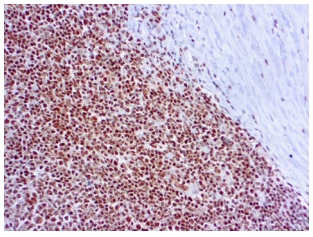
Overlay histogram showing HeLa cells stained with ab2175 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab2175, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [9H8] (ab2175)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-RPA32/RPA2 antibody

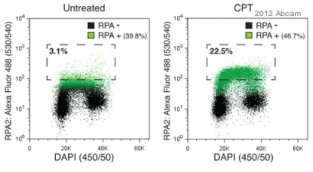
Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human tonsil tissue, staining RPA32/RPA2 with ab2175. Staining was detected using DAB.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RPA32/RPA2 antibody [9H8] (ab2175)

RPA32/RPA2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-RPA32/RPA2 antibody

Formalin-fixed, paraffin-embeded human tonsil tissue stained for RPA32/RPA2 using ab2175 at 1/50 dilution in immunohistochemical analysis. Antigen retrieval with citrate buffer pH 6.0



This image is courtesy of an anonymous customer

Flow Cytometry - Anti-RPA32/RPA2 antibody [9H8] (ab2175)

Anti-RPA/32/RPA2 antibody [9H8] (ab2175) is used to measure DNA Double-Stranded Breaks resection in U2OS cells +/- Camptotechin (CPT).
ab2175 is used at 1/200 dilution in 1xPBS + 0.2% Triton X-100 for 1 hour at 25°C.

Secondary antibody: anti-mouse Molecular Probes Alexa Fluor® 488 Conjugated at 1/200 dilution.

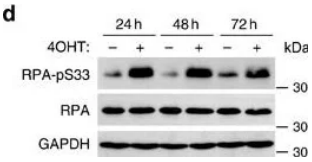


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Western blot - Anti-RPA32/RPA2 antibody [9H8] (ab2175)

RPA32/RPA2 Western blot staining using mouse Anti-RPA32/RPA2 antibody

Western Blotting using Anti-RPA32/RPA2 antibody [9H8], ab2175. Publication image from Gromak, N. et al., 2016, Nat Commun, 27725641. Legend direct from paper.

HRASV12 causes replication stress and genomic instability.(a) Top: DNA fibre labelling was performed in BJ-HRASV12 cells after RAS induction for 24, 48 and 72 h. Bottom: representative images of DNA fibres after 72 h RAS induction. (b) Distributions of replication fork speeds after RAS induction. N=3. (c) Median replication fork speeds after RAS induction. N=3. (d) Protein levels of phospho-S33 RPA32, RPA32 and GAPDH after RAS induction. (e) Protein levels of phospho-S345 CHK1, CHK1 and GAPDH after RAS induction. Hydroxyurea (HU, 2 mM for 24 h) was used as a positive control. (f) Representative images of γH2AX and 53BP1 foci after RAS induction for 96 h. (g) Percentages of cells containing more than 8 γH2AX or 53BP1 foci after RAS induction for 96 h. N=2. Asterisks compare with control. (h) Cell cycle distribution of 53BP1-positive cells after 96 h RAS induction as determined by co-staining with Cyclin A. Right panel: representative images; left panel: quantification. N=3. (i) Representative images of cells with micronuclei and percentages of cells containing micronuclei after RAS induction for 1–6 days. N=2. Asterisks compare with control. Means ±s.e.m. (bars) are shown. Student's t-test, *P<0.05 and **P<0.01. Scale bars, 10 μm.

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