

Product datasheet

Anti-53BP1 antibody ab21083

★★★★★ [5 Abreviews](#) [101 References](#) [6 Images](#)

Overview

Product name	Anti-53BP1 antibody
Description	Rabbit polyclonal to 53BP1
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Human
Immunogen	Synthetic peptide corresponding to Human 53BP1 (C terminal). Conjugated to a carrier protein. Database link: Q12888

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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin 300 Constituents: 79% PBS, 20% Glycerol (glycerin, glycerine)
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

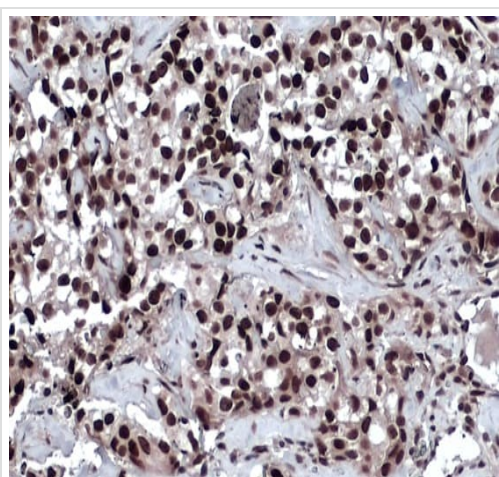
The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab21083 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (2)	1/500 - 1/3000. Detects a band of approximately 350 kDa (predicted molecular weight: 220 kDa).
IHC-P		1/1000 - 1/4000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

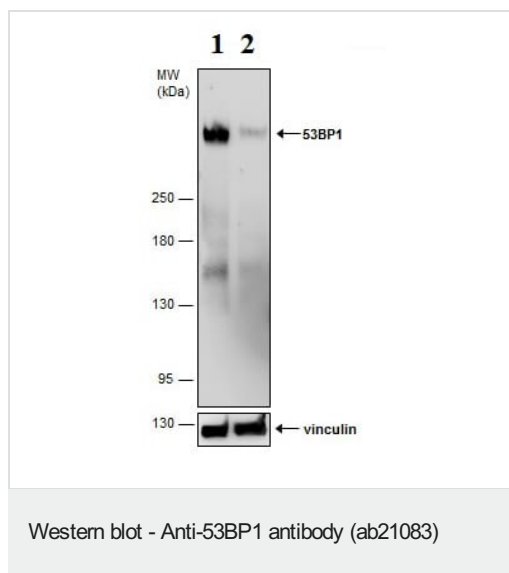
Function	May have a role in checkpoint signaling during mitosis. Enhances TP53-mediated transcriptional activation. Plays a role in the response to DNA damage.
Involvement in disease	Note=A chromosomal aberration involving TP53BP1 is found in a form of myeloproliferative disorder chronic with eosinophilia. Translocation t(5;15)(q33;q22) with PDGFRB creating a TP53BP1-PDGFRB fusion protein.
Sequence similarities	Contains 2 BRCT domains.
Post-translational modifications	Asymmetrically dimethylated on Arg residues by PRMT1. Methylation is required for DNA binding. Phosphorylated at basal level in the absence of DNA damage. Hyper-phosphorylated in an ATM-dependent manner in response to DNA damage induced by ionizing radiation. Hyper-phosphorylated in an ATR-dependent manner in response to DNA damage induced by UV irradiation.
Cellular localization	Nucleus. Chromosome > centromere > kinetochore. Associated with kinetochores. Both nuclear and cytoplasmic in some cells. Recruited to sites of DNA damage, such as double strand breaks. Methylation of histone H4 at 'Lys-20' is required for efficient localization to double strand breaks.

Images



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue labeling 53BP1 with ab21083 at 1/4000 dilution. Nuclear staining is observed. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-53BP1 antibody (ab21083)



All lanes : Anti-53BP1 antibody (ab21083) at 1/500 dilution

Lane 1 : 53BP1 shRNA non-transfected HeLa whole cell extracts

Lane 2 : 53BP1 shRNA transfected HeLa whole cell extracts

Lysates/proteins at 50 µg per lane.

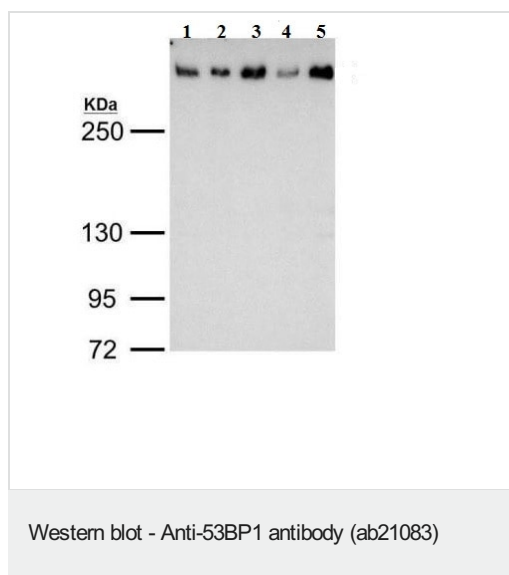
Secondary

All lanes : HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 220 kDa

Observed band size: 350 kDa

5% SDS-PAGE



All lanes : Anti-53BP1 antibody (ab21083) at 1/2000 dilution

Lane 1 : 293T whole cell lysate/extract

Lane 2 : A431 whole cell lysate/extract

Lane 3 : HeLa whole cell lysate/extract

Lane 4 : HepG2 whole cell lysate/extract

Lane 5 : A375 whole cell lysate/extract

Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 220 kDa

Observed band size: 350 kDa

5% SDS-PAGE.

Running conditions: 80V, 15min; 140V, 40min.

Transfer condition: Semi-dry, 18 V, 60min (Nitrocellulose membrane).

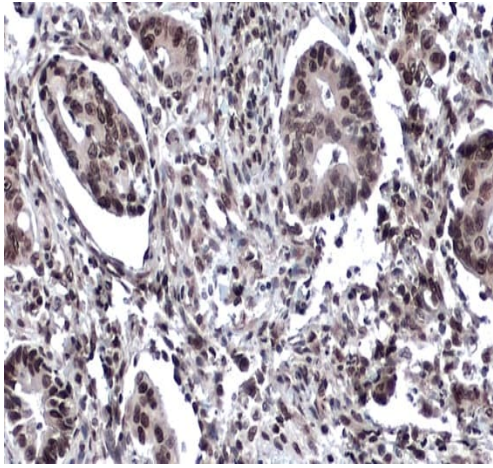
Blocking condition: 5% non-fat milk in TBST, RT, 60min.

Primary antibody incubation: 1/2000, 4?, overnight.

Secondary antibody incubation: Rabbit IgG antibody (HRP),
1/10,000, RT, 1hr.

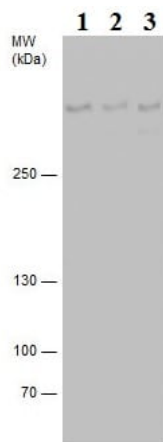
Washing condition: 5 ml TBST, 4 x 5min.

Exposure system: Trident plus Western HRP Substrate.



Immunohistochemistry (Formalin/PFA-fixed paraffin-
embedded sections) - Anti-53BP1 antibody
(ab21083)

Immunohistochemical analysis of paraffin-embedded human colon
cancer tissue labeling 53BP1 with ab21083 at 1/4000 dilution. Nuclear staining is
observed. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min.



Western blot - Anti-53BP1 antibody (ab21083)

All lanes : Anti-53BP1 antibody (ab21083) at 1/500 dilution

Lane 1 : Neuro2A whole cell extracts

Lane 2 : C8D30 whole cell extracts

Lane 3 : NIH-3T3 whole cell extracts

Lysates/proteins at 30 µg per lane.

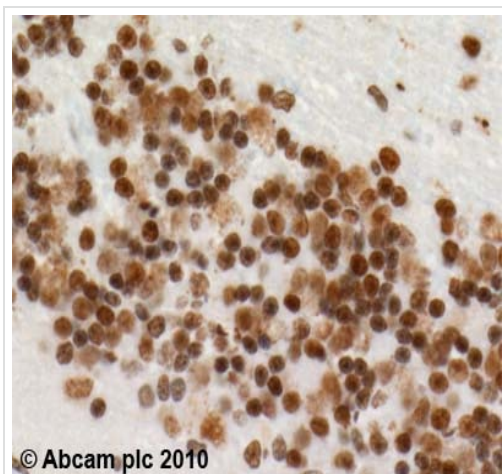
Secondary

All lanes : HRP-conjugated anti-rabbit IgG antibody

Predicted band size: 220 kDa

Observed band size: 350 kDa

5% SDS-PAGE



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-53BP1 antibody (ab21083)

ab21083 (2µg/ml) staining 53BP1 in human Brain: Cerebellum using an automated system (DAKO Autostainer Plus). Using this protocol there is ubiquitous nuclear staining throughout. Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer EDTA pH 9.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H₂O₂ in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.

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