

Product datasheet

Anti-53BP1 antibody [EPR2173(2)] ab175188

KO VALIDATED Recombinant RabMAb[®]

★★★★★ [1 Abreviews](#) [2 References](#) [6 Images](#)

Overview

Product name	Anti-53BP1 antibody [EPR2173(2)]
Description	Rabbit monoclonal [EPR2173(2)] to 53BP1
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF Unsuitable for: Flow Cyt or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human 53BP1 aa 900-1000 (Cysteine residue). The exact sequence is proprietary. Database link: Q12888
Positive control	WB: HAP1, HeLa, and HepG2 lysates. Human fetal brain and heart lysates. IHC-P: Human cervical carcinoma and prostate hyperplasia tissue. ICC: HepG2 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 9% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA, 50% Tissue culture

	supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EPR2173(2)
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab175188 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

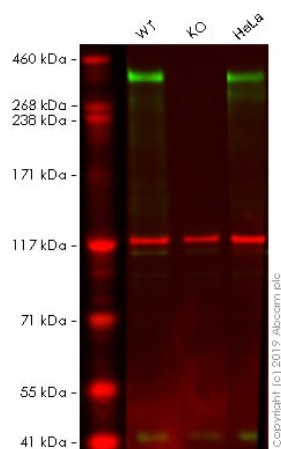
Application	Abreviews	Notes
WB		1/50000 - 1/200000. Predicted molecular weight: 214 kDa.
IHC-P		1/50 - 1/100. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF	★★★★★ (1)	1/100 - 1/250.

Application notes Is unsuitable for Flow Cyt or IP.

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



Western blot - Anti-53BP1 antibody [EPR2173(2)] (ab175188)

All lanes : Anti-53BP1 antibody [EPR2173(2)] (ab175188) at 1/50000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : TP53BP1 knockout HAP1 whole cell lysate

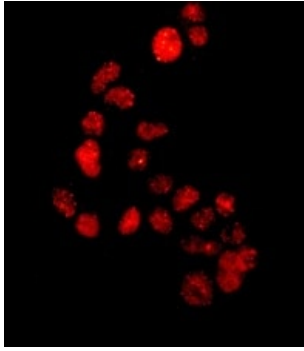
Lane 3 : HeLa whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 214 kDa

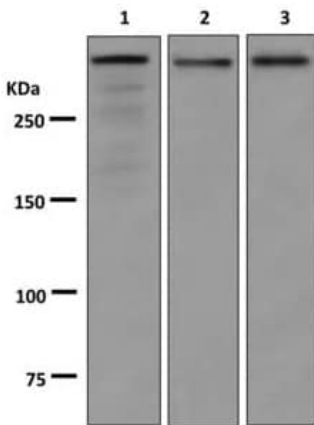
Lanes 1 - 3: Merged signal (red and green). Green - ab175188 observed at 213 kDa. Red - loading control, **ab130007**, observed at 130 kDa.

ab175188 was shown to recognize 53BP1 in wild-type HAP1 cells as signal was lost at the expected MW in TP53BP1 knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and TP53BP1 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. Ab175188 and **ab130007** (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 1/50000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed **ab216776** secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.



Immunocytochemistry/ Immunofluorescence - Anti-53BP1 antibody [EPR2173(2)] (ab175188)

Immunofluorescence analysis of HepG2 cells labeling 53BP1 with ab175188 at a 1/100 dilution.



Western blot - Anti-53BP1 antibody [EPR2173(2)] (ab175188)

All lanes : Anti-53BP1 antibody [EPR2173(2)] (ab175188) at 1/50000 dilution

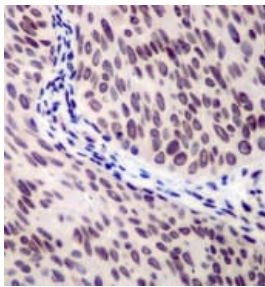
Lane 1 : Human fetal heart tissue lysate

Lane 2 : HepG2 cell lysate

Lane 3 : Human fetal brain tissue lysate

Lysates/proteins at 10 µg per lane.

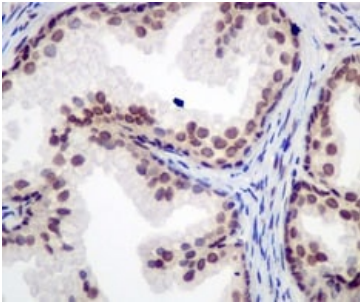
Predicted band size: 214 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-53BP1 antibody [EPR2173(2)] (ab175188)

Immunohistochemical analysis of paraffin-embedded Human cervical carcinoma tissue labeling 53BP1 with ab175188 at a 1/50 dilution.

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



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-53BP1 antibody [EPR2173(2)] (ab175188)

Immunohistochemical analysis of paraffin-embedded Human prostate hyperplasia tissue labeling 53BP1 with ab175188 at a 1/50 dilution.

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

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-53BP1 antibody [EPR2173(2)] (ab175188)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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