Product Datasheet

53BP1 Antibody
NB100-304SS

Unit Size: 0.025 ml

Store at 4C. Do not freeze.

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NB100-304SS

53BP1 Antibody

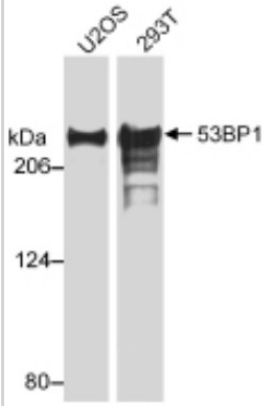
Product Information	
Unit Size	0.025 ml
Concentration	1 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Purity	Immunogen affinity purified
Buffer	Tris-citrate/phosphate, pH 7-8
Target Molecular Weight	214 kDa

Product Description	
Host	Rabbit
Gene ID	7158
Gene Symbol	TP53BP1
Species	Human, Mouse, Rat, Fish, Goat, Primate
Species Reactivity	Human, mouse, rat and goat. Human has been tested in WB, IHC-P and ICC/IF, mouse and goat have only been tested in ICC/IF. Primate reactivity reported in scientific literature (PMID: 18389475).Fish reactivity reported in scientific literature (PMID: 25516420)
Marker	DNA Double Strand Break Marker
Immunogen	The epitope recognized by this antibody maps to a region between residues 350 and 400 of human 53BP1 [NP_005648.1].

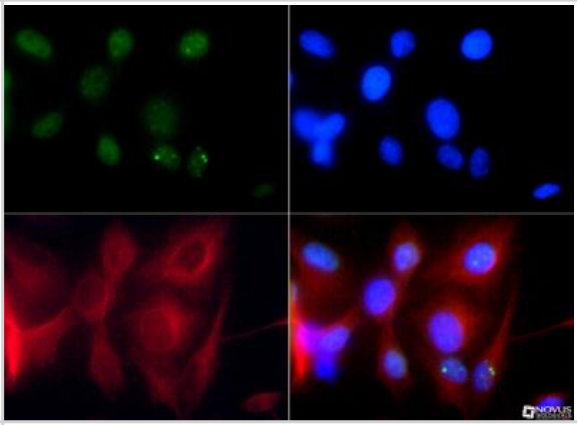
Product Application Details	
Applications	Western Blot, Chromatin Immunoprecipitation, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Chromatin Immunoprecipitation, Flow Cytometry 1.5 ug/ml, Immunocytochemistry/Immunofluorescence 1:1000-1:5000, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin 1:1000-1:5000, Western Blot 1:5000-1:25000
Application Notes	This 53BP1 antibody is useful for Western Blot, Immunohistochemistry on paraffin-embedded sections, Immunocytochemistry and Flow Cytometry. Epitope retrieval with citrate buffer pH 6.0 is recommended for FFPE tissue sections. Immunohistochemistry-Paraffin and Immunohistochemistry were reported in scientific literature. Frozen section data from customer review. Use in chromatin immunoprecipitation reported in scientific literature (PMID 24591601)

Images

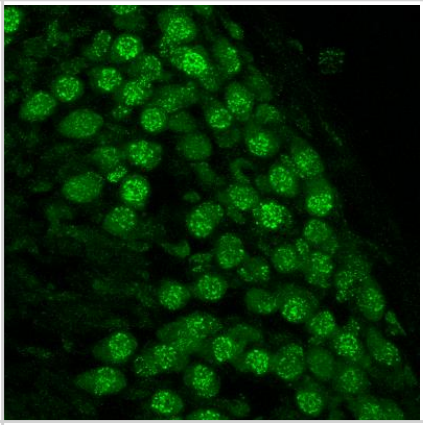
Western Blot: 53BP1 Antibody [NB100-304] - Detection of 53BP1 by Western Blot Sample: Whole cell lysate from U2OS or 293T cells.



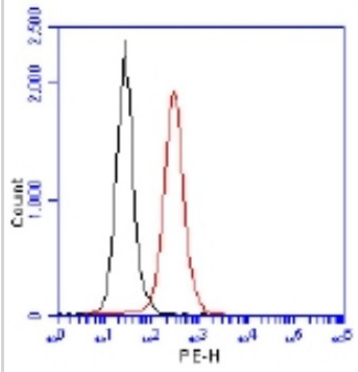
Immunocytochemistry/Immunofluorescence: 53BP1 Antibody [NB100-304] - 53BP1 antibody was tested at 1:100 in HeLa cells with FITC (green). alpha-Tubulin antibody NB100-690 was tested at a 1:500 dilution using Mouse IgG secondary Antibody NB710-94914 at 1:1000 [HiLyte Fluor 555] (red). Nuclei were counterstained with Dapi (blue).

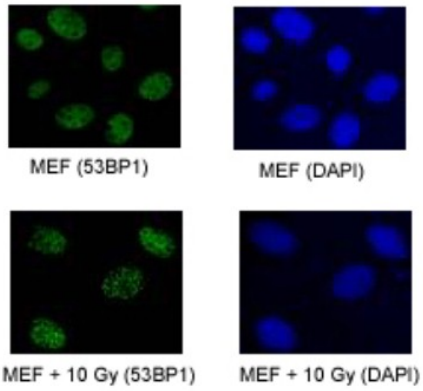
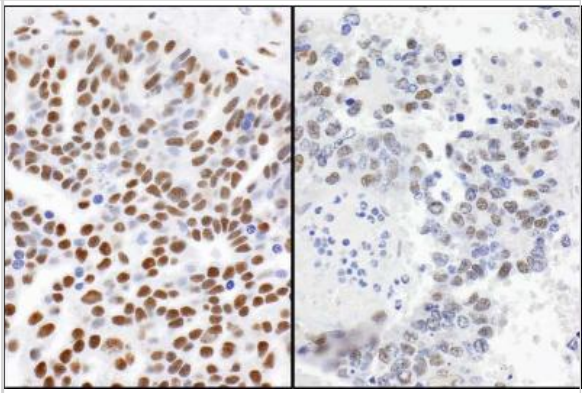
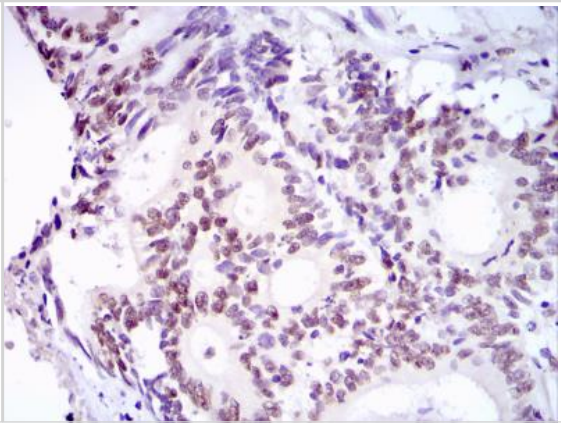


Immunohistochemistry-Frozen: 53BP1 Antibody [NB100-304] - Irradiated cochlear spiral ganglion cells, mouse, frozen section of fixed material. Data and image from confirmed customer review.



Flow Cytometry: 53BP1 Antibody [NB100-304] - 1 million Jurkat cells were fixed, permeabilized, and stained with 1.5 ug/ml anti-53BP1 NB100 -304 in a 150 ul reaction. Isotype control (black), anti-53BP1 (red).



Immunocytochemistry/Immunofluorescence: 53BP1 Antibody [NB100-304] - 53BP1 foci in proliferating MEFs; both normal and exposed to 10 Gy of IR.	
Immunohistochemistry-Paraffin: 53BP1 Antibody [NB100-304] - Detection of Human and Mouse 53BP1 by IHC. Sample: FFPE sections of human ovarian carcinoma (left) and mouse teratoma (right). Antibody: NB100-304 used at a dilution of 1:1,000 (1ug/ml). Detection: DAB.	
Immunohistochemistry-Paraffin: 53BP1 Antibody [NB100-304] - IHC staining of 53BP1 in human colon cancer using DAB with hematoxylin counterstain.	

Publications

Badie S, Carlos AR, Folio C et al. BRCA1 and CtIP promote alternative non-homologous end-joining at uncapped telomeres EMBO J. 2015 Jan 12 [PMID: 25582120] (WB, ICC/IF, Mouse)

Gibbs-Seymour I, Markiewicz E, Bekker-Jensen S et al. Lamin A/C-dependent interaction with 53BP1 promotes cellular responses to DNA damage Aging Cell. 2015 Jan 23 [PMID: 25645366] (IP, Human)

Torres G, Leheste JR, Ramos RL. Immunocytochemical localization of dna double-strand breaks in human and rat brain Neuroscience. 2015 Jan 27 [PMID: 25637486] (ICC/IF, Rat)

Mender I, Gryaznov S, Dikmen ZG et al. Induction of Telomere Dysfunction Mediated by the Telomerase Substrate Precursor 6-Thio-2'-Deoxyguanosine. Cancer Discov. 2014 Dec 16 [PMID: 25516420] (FISH)

Ito H, Fujita K, Tagawa K et al. HMGB1 facilitates repair of mitochondrial DNA damage and extends the lifespan of mutant ataxin-1 knock-in mice. EMBO Mol Med. 2015 Jan 06 [PMID: 25510912] (IHC-P, Mouse)

Baltanas FC, Valero J, Alonso JR et al. Nuclear Signs of Pre-neurodegeneration. Methods Mol. Biol. 2014 Nov 28 [PMID: 25431056] (ICC/IF, Mouse)

Diotti R, Kalan S, Matveyenko A, Loayza D. DNA-directed Polymerase Subunits Play a Vital Role in Human Telomeric Overhang Processing. Mol. Cancer Res. 2014 Dec 17 [PMID: 25519149] (ICC/IF, Human)

Baranski OA, Kalinichenko VV, Adami GR. Increased FOXM1 expression can stimulate DNA repair in normal hepatocytes in vivo but also increases nuclear foci associated with senescence. Cell Prolif. 2014 Dec 05 [PMID: 25477198] (IHC-Fr, Mouse)

Details:
53BP1 antibody used at 1-1000 dilution for IHC-Fr application on 2% PFA fixed liver sections of C57BL/6 and Tg (TTR-FOXM1)1Rhc mice that were exposed to Diethylnitrosamine/DEN carcinogen (Figure 3 and 4).

Li Z, Wang H, Wang Y et al. Effect of Radiation Quality on Mutagenic Joining of Enzymatically-Induced DnA Double-Strand Breaks in Previously Irradiated Human Cells. Radiat. Res. 2014 Oct 20 [PMID: 25329962]

Zimmermann M, Kibe T, Kabir S, De Lange T. TRF1 negotiates TTAGGG repeat-associated replication problems by recruiting the BLM helicase and the TPP1/POT1 repressor of ATR signaling. Genes Dev. 2014 Oct 24 [PMID: 25344324] (WB, ICC/IF, Mouse)

Tang M, Li Y, Zhang X et al. Structural maintenance of chromosomes flexible hinge domain containing 1 (SMCHD1) promotes non-homologous end joining and inhibits homologous recombination repair upon DnA damage. J. Biol. Chem. 2014 Oct 07 [PMID: 25294876] (WB, ICC/IF, Human)

Fumagalli M, Rossiello F, Mondello C, D'Adda Di Fagagna F. Stable Cellular Senescence Is Associated with Persistent DDR Activation. PLoS OnE. 2014 Oct 24 [PMID: 25340529] (ICC/IF, Human)

More publications at http://www.novusbio.com/NB100-304

Procedures

Immunohistochemistry Protocol Specific for NB100-304: 53BP1 Antibody (NB100-304)
Materials

1) 1 Phosphate buffered saline (pH 7.6): NaCl 137mmol/L, KCl 2.7mmol/L, Na2HPO4 4.3mmol/L, KH2PO4 1.4 mmol/L
2) Citrate buffer, 0.01 M, pH6.0, Sodium Citrate 3g, Citric acid 0.4g
3) 3% Hydrogen peroxide
4) Primary antibody
5) Blocking serum (normal serum)
6) Biotinylated secondary antibody
7) DAB staining kit

Methods

1. Dewax and hydration of slides using xylene and EtOH:
Dry slides for 20 min in a 60 C oven
Add Xylene, 2 x 10 min
100%, 95%, 80%, and 70% EtOH, 5 min each EtOH concentration
Rinse in PBS, 5'

2 Antigen retrieval method (only for paraffin slides)
1a. High-pressure antigen retrieval procedure (recommended method)
Place slides in a glass slide holder (ensure that the slide holder is completely filled with slides, slides without sections if necessary, to ensure even heating. The entire slide holder is immersed in 1000 ml of Citrate buffer (0.01M, pH6.0) within a pressure cooker
Once steam is produced, and ONLY when steam is visible, from the pressure cooker (usually 15-20 min), the required high-pressure will have been reached, and slides will be incubated for 2 min.
Turn off heat, and allow buffer and slides to cool to room temperature
Slides are then rinsed in PBS for 5 minutes
2. Add 3% hydrogen peroxide solution, 10'at RT, then PBS, 3X5'
3. Normal blocking serum, 20'at RT
4. Incubate with Primary Ab, 4C overnight or 1.5 hours at 37C
5. Rinse with PBS, 3 X 5' each rinse
6. Add Biotin-conjugated second antibody, 10'at RT
7. Rinse with PBS, 3 X 5' each rinse
8. Add Streptavidin-Peroxidase, 10'at RT
9. Rinse with PBS, 3 X 5' each rinse
10. Staining with DAB solution, 2-5'under microscope
11. Stop the reaction by washing in tap water
12. Counterstain in Haematoxylin for 3-5 minutes
13. 75%, 80%, 95% and 100% ethanol, 5x2', xylene 2 x 10'

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Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our guarantee, please visit www.novusbio.com/guarantee.