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Product datasheet for TA337093

53BP1 (TP53BP1) Mouse Monoclonal Antibody [Clone ID: 6B3E10]

Product data:

Product Type:	Primary Antibodies
Clone Name:	6B3E10
Applications:	FC, ICC/IF, IHC, WB
Recommended Dilution:	Immunohistochemistry-Paraffin: 1:200 - 1:1000, Immunohistochemistry: 1:200 - 1:1000, Flow Cytometry: 1:200 - 1:400, Western Blot: 1:500 - 1:2000, Immunocytochemistry/ Immunofluorescence
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Partial recombinant human 53BP1 (between residues 500-800) expressed in E. coli [Uniprot Q12888]
Formulation:	PBS, 0.03% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	lot specific
Purification:	Ammonium sulfate precipitation
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	213 kDa
Gene Name:	tumor protein p53 binding protein 1
Database Link:	NP_005648 Entrez Gene 7158 Human Q12888

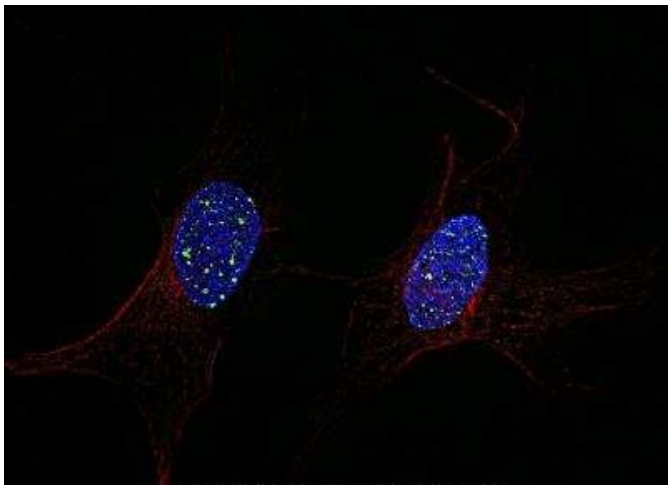
View online »

Background: 53BP1 (p53 binding protein 1) plays a key role in response to DNA damage, checkpoint signaling during mitosis and enhancing TP53-mediated transcriptional activation. Originally identified as p53's transcriptional enhancing partner, 53BP1 now has been established as a substrate for ATM (ataxia telangiectasia mutated) signaling and that it relocalizes to discrete foci overlapping with gamma H2AX (phosphorylated histone H2AX); demarcating DNA double strand breaks (DSBs) sites following exposure to radiation. 53BP1 functions downstream of gamma H2AX-dependent hierarchy of proteins that collectively establish IRIF (ionizing radiation induced foci) at DSBs; this hierarchy includes Mre11/Rad50/NBS1 (MRN complex), ATM, MDC1, RNF8, RNF168 and HERC2. With the exception of ATM, whose function to generate gamma H2AX may be partially compensated by the activity of DNA-PK (DNA-dependent kinase), all of these proteins are physically and functionally required to recruit 53BP1 to the DSB site. Briefly, this process involves DSB recognition by MRN, ATM activation, gamma H2AX-formation, MDC1-recruitment, MRN-retention (leading to further ATM-activation and gamma H2AX spreading) and RNF8/RNF168/HERC2-mediated histone H2A and H2AX mono and poly-ubiquitination.

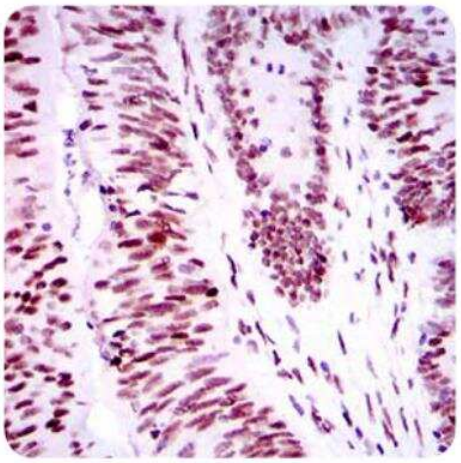
Synonyms: 53BP1; p202

Protein Families: Druggable Genome, Transcription Factors

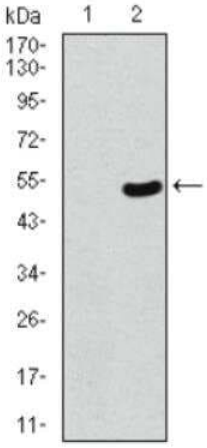
Product images:



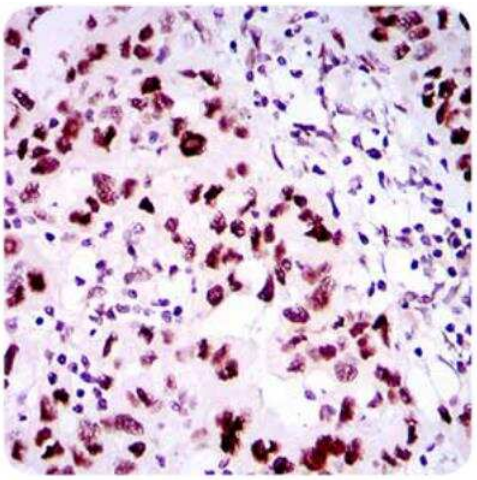
Immunocytochemistry/Immunofluorescence: 53BP1 Antibody (6B3E10) TA337093 - Ntera2 cells were fixed in 4% paraformaldehyde for 10 minutes and permeabilized in 0.5% Triton X-100 in PBS for 5 minutes. The cells were incubated with anti-53BP1 Antibody [6B3E10] TA337093 at 2 ug/ml overnight at 4C and detected with an anti-mouse DyLight 488 (Green) at a 1:1000 dilution for 60 minutes. Beta tubulin NB600-936 was used as a co-stain at a 1:1000 dilution and detected with an anti-rabbit DyLight 550 (Red) at a 1:1000 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 100X objective and digitally deconvolved.



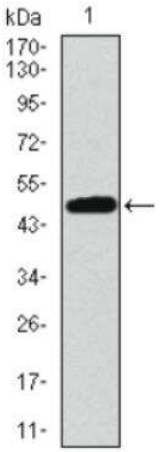
Immunohistochemistry: 53BP1 Antibody (6B3E10) TA337093 - Analysis of paraffin-embedded colon cancer tissues using 53BP1 Antibody with DAB staining.



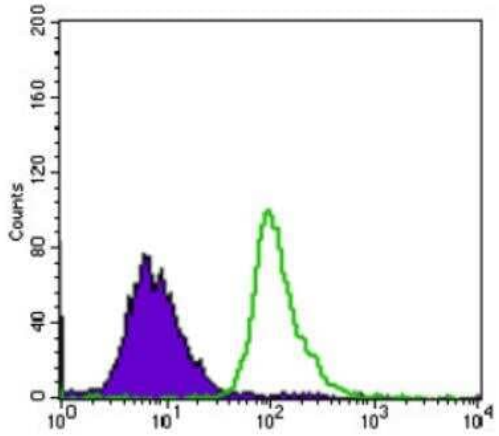
Western Blot: 53BP1 Antibody (6B3E10) TA337093 - Western blot analysis using against HEK293 (1) and 53BP1 (AA: 574-773)-hIgGFc transfected HEK293 (2) cell lysate. The observed molecular weight is ~52 kDa and the theoretical molecular weight of the whole endogenous protein is 214 kDa.



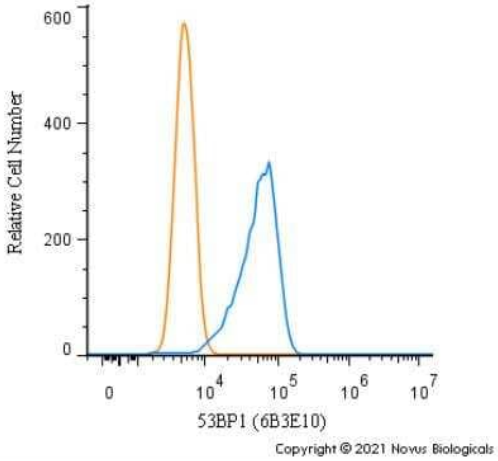
Immunohistochemistry: 53BP1 Antibody (6B3E10) TA337093 - Analysis of paraffin-embedded endometrial cancer tissues using 53BP1 Antibody with DAB staining.



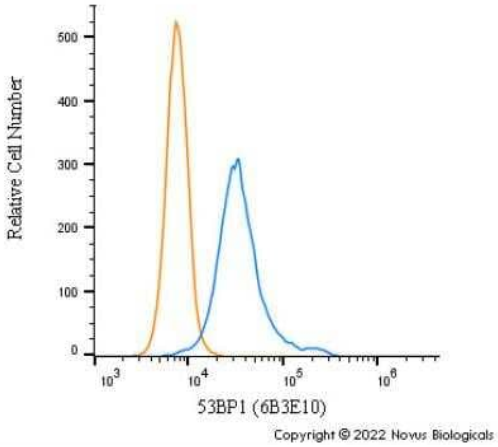
Western Blot: 53BP1 Antibody (6B3E10) TA337093 - Western blot analysis using 53BP1 Antibody against human 53BP1 recombinant protein. The expected molecular weight is 47.6 kDa which is demonstrated in this analysis, and the theoretical molecular weight of the whole endogenous protein is 214 kDa.



Flow Cytometry: 53BP1 Antibody (6B3E10) TA337093 - Analysis of HepG2 cells using 53BP1 Antibody (green) and negative control (purple).



Flow Cytometry: 53BP1 Antibody (6B3E10) TA337093 - An intracellular stain was performed on Ntera2 cells with 53BP1 Antibody [6B3E10] TA337093 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (35503, Thermo Fisher).



Flow Cytometry: 53BP1 Antibody (6B3E10) TA337093 - An intracellular stain was performed on HeLa cells with 53BP1 (6B3E10) Antibody TA337093 (blue) and a matched isotype control MAB002 (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1.0 ug/mL for 30 minutes at room temperature, followed by Mouse IgG (H+L) Cross-Adsorbed Secondary Antibody, Dylight 550 (35503, Thermo Fisher).