

KD-Validated Anti-TP53BP1 Mouse Monoclonal Antibody

Mouse monoclonal antibody

Catalog # AGI2089

Specification

KD-Validated Anti-TP53BP1 Mouse Monoclonal Antibody - Product Information

Application	WB
Primary Accession	Q12888
Reactivity	Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG2b
Calculated MW	Predicted, 214 kDa, observed, 450 kDa
Gene Name	KDa
Aliases	TP53BP1 TP53BP1; Tumor Protein P53 Binding Protein 1; 53BP1; TDRD30; P202; TP53-Binding Protein 1; P53-Binding Protein 1; P53BP1; Tumor Suppressor P53-Binding Protein 1; Tumor Protein P53-Binding Protein, 1; Tumor Protein 53-Binding Protein, 1
Immunogen	Recombinant protein of human TP53BP1

KD-Validated Anti-TP53BP1 Mouse Monoclonal Antibody - Additional Information

Gene ID	7158
Other Names	TP53-binding protein 1, 53BP1, p53-binding protein 1, p53BP1, TP53BP1 (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=11999)
	target="_blank">HGNC:11999)

KD-Validated Anti-TP53BP1 Mouse Monoclonal Antibody - Protein Information

Name TP53BP1 ([HGNC:11999](#))

Function

Double-strand break (DSB) repair protein involved in response to DNA damage, telomere dynamics and class-switch recombination (CSR) during antibody genesis (PubMed:[12364621](http://www.uniprot.org/citations/12364621), PubMed:[17190600](http://www.uniprot.org/citations/17190600), PubMed:[21144835](http://www.uniprot.org/citations/21144835), PubMed:[22553214](http://www.uniprot.org/citations/22553214), PubMed:[23333306](http://www.uniprot.org/citations/23333306), PubMed:[27153538](http://www.uniprot.org/citations/27153538), PubMed:[28241136](http://www.uniprot.org/citations/28241136), PubMed:[31135337](http://www.uniprot.org/citations/31135337), PubMed:[37696958](http://www.uniprot.org/citations/37696958)). Plays a key role in the repair of double-strand DNA breaks (DSBs) in response to DNA damage by promoting

non-homologous end joining (NHEJ)-mediated repair of DSBs and specifically counteracting the function of the homologous recombination (HR) repair protein BRCA1 (PubMed:22553214, PubMed:23333306, PubMed:23727112, PubMed:27153538, PubMed:31135337). In response to DSBs, phosphorylation by ATM promotes interaction with RIF1 and dissociation from NUDT16L1/TIRR, leading to recruitment to DSBs sites (PubMed:28241136). Recruited to DSBs sites by recognizing and binding histone H2A monoubiquitinated at 'Lys-15' (H2AK15Ub) and histone H4 dimethylated at 'Lys-20' (H4K20me2), two histone marks that are present at DSBs sites (PubMed:17190600, PubMed:23760478, PubMed:27153538, PubMed:28241136). Required for immunoglobulin class- switch recombination (CSR) during antibody genesis, a process that involves the generation of DNA DSBs (PubMed:23345425). Participates in the repair and the orientation of the broken DNA ends during CSR (By similarity). In contrast, it is not required for classic NHEJ and V(D)J recombination (By similarity). Promotes NHEJ of dysfunctional telomeres via interaction with PAXIP1 (PubMed:23727112).

Cellular Location

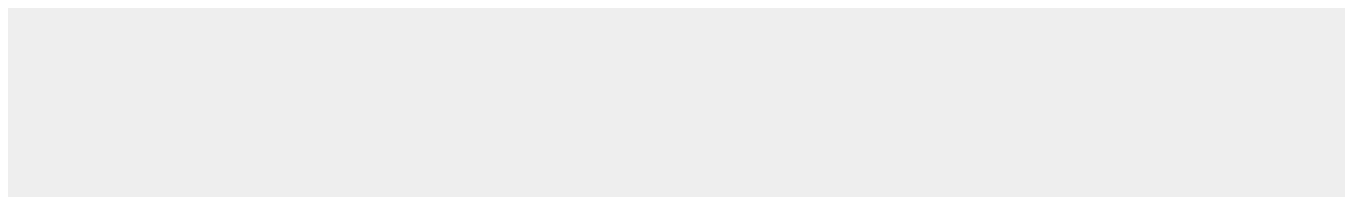
Nucleus. Chromosome. Chromosome, centromere, kinetochore {ECO:0000250|UniProtKB:P70399}. Note=Localizes to the nucleus in absence of DNA damage (PubMed:28241136). Following DNA damage, recruited to sites of DNA damage, such as double strand breaks (DSBs): recognizes and binds histone H2A monoubiquitinated at 'Lys-15' (H2AK15Ub) and histone H4 dimethylated at 'Lys-20' (H4K20me2), two histone marks that are present at DSBs sites (PubMed:17190600, PubMed:23333306, PubMed:23760478, PubMed:24703952, PubMed:28241136, PubMed:31135337, PubMed:37696958). Associated with kinetochores during mitosis (By similarity). {ECO:0000250|UniProtKB:P70399, ECO:0000269|PubMed:17190600, ECO:0000269|PubMed:23333306, ECO:0000269|PubMed:23760478, ECO:0000269|PubMed:28241136, ECO:0000269|PubMed:37696958}

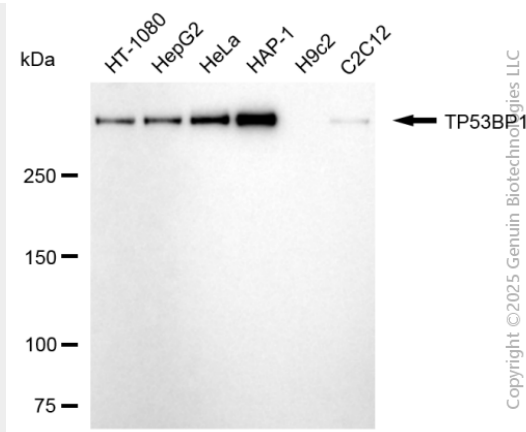
KD-Validated Anti-TP53BP1 Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

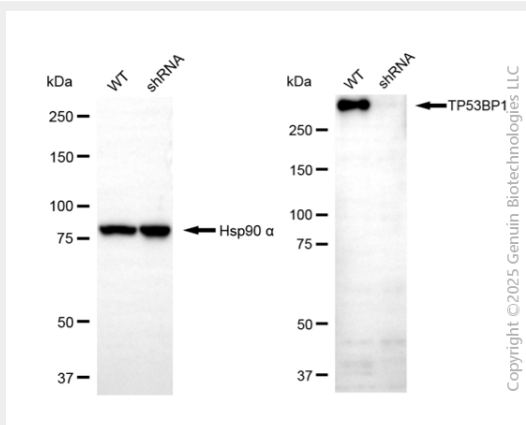
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-TP53BP1 Mouse Monoclonal Antibody - Images





Western blotting analysis using anti-TP53BP1 antibody (Cat#AGI2089). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-TP53BP1 antibody (Cat#AGI2089, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-TP53BP1 antibody (Cat#AGI2089). TP53BP1 expression in wild-type (WT) and TP53BP1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-TP53BP1 antibody (Cat#AGI2089, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.