

**53BP1 Antibody**  
**Rabbit mAb**  
**Catalog # AP91261**

## Specification

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### 53BP1 Antibody - Product Information

Application	WB, IHC, FC, ICC
Primary Accession	<a href="#">Q12888</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
Tumor suppressor p53-binding protein 1; 53 BP1; p53-binding protein 1; p53BP1; TP53BP1; p53-BP1; p202;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	213574 Da

### 53BP1 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human 53BP1
Description	May have a role in checkpoint signaling during mitosis. Enhances TP53-mediated transcriptional activation. Plays a role in the response to DNA damage.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

### 53BP1 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:<a href="http://www.uniprot.org/citations/22553214" target="\_blank">22553214</a>, PubMed:<a href="http://www.uniprot.org/citations/23333306" target="\_blank">23333306</a>, PubMed:<a href="http://www.uniprot.org/citations/23727112" target="\_blank">23727112</a>, PubMed:<a href="http://www.uniprot.org/citations/27153538" target="\_blank">27153538</a>, PubMed:<a href="http://www.uniprot.org/citations/31135337" target="\_blank">31135337</a>). In response to DSBs, phosphorylation by ATM promotes interaction with RIF1 and dissociation from NUDT16L1/TIRR, leading to recruitment to DSBs sites (PubMed:<a href="http://www.uniprot.org/citations/28241136" target="\_blank">28241136</a>). 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:<a href="http://www.uniprot.org/citations/17190600" target="\_blank">17190600</a>, PubMed:<a href="http://www.uniprot.org/citations/23760478" target="\_blank">23760478</a>, PubMed:<a href="http://www.uniprot.org/citations/27153538" target="\_blank">27153538</a>, PubMed:<a href="http://www.uniprot.org/citations/28241136" target="\_blank">28241136</a>). Required for immunoglobulin class- switch recombination (CSR) during antibody genesis, a process that involves the generation of DNA DSBs (PubMed:<a href="http://www.uniprot.org/citations/23345425" target="\_blank">23345425</a>). 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:<a href="http://www.uniprot.org/citations/23727112" target="\_blank">23727112</a>).

#### 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}

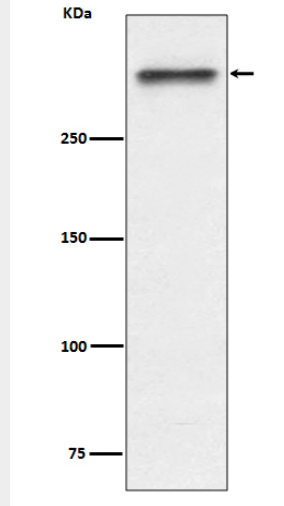
#### 53BP1 Antibody - Protocols

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](#)

#### 53BP1 Antibody - Images





Western blot analysis of 53BP1 expression in HeLa cell lysate.