

53BP1 Rabbit mAb
Catalog # AP76962**Specification**

53BP1 Rabbit mAb - Product Information

Application	WB, IHC-P, FC, ICC
Primary Accession	O12888
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	213574

53BP1 Rabbit mAb - Additional Information

Gene ID 7158

Other Names

TP53BP1

Format

Liquid

53BP1 Rabbit mAb - Protein InformationName 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](http://www.uniprot.org/citations/22553214)), PubMed: [23333306](http://www.uniprot.org/citations/23333306)), PubMed: [23727112](http://www.uniprot.org/citations/23727112)), PubMed: [27153538](http://www.uniprot.org/citations/27153538)), PubMed: [31135337](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/17190600), PubMed:[23760478](http://www.uniprot.org/citations/23760478), PubMed:[27153538](http://www.uniprot.org/citations/27153538), PubMed:[28241136](http://www.uniprot.org/citations/28241136)). Required for immunoglobulin class- switch recombination (CSR) during antibody genesis, a process that involves the generation of DNA DSBs (PubMed:[23345425](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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}

53BP1 Rabbit mAb - 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 Rabbit mAb - Images