Rabbit 53BP1 Polyclonal Antibody | anti-53BP1 antibody

Phospho-53BP1 (Thr543) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA323705	**Rabbit**	**Human, Monkey**	**ELISA, Immunocytochemistry, Immunofluorescence, Western Blot**

PRODUCT SYNONYMS

53BP1; Polyclonal Antibody; Phospho-53BP1 (Thr543) Antibody; 53 BP1; FLJ41424; MGC138366; p202; p53 binding protein 1; p53 BP1; p53-binding protein 1; p53BP1; TP53 BP1; TP53B_HUMAN; Tp53bp1; TRP53 BP1; Tumor protein 53 binding protein 1; Tumor protein p53 binding protein 1; Tumor suppressor p53 binding protein 1; Tumor suppressor p53-binding protein 1; anti-53BP1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Monkey
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-53BP1 (Thr543) antibody detects endogenous levels of 53BP1 only when phosphorylated at Thr543
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1975
Applicable Applications for anti-53BP1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Phospho-53BP1 (Thr543)
Subcellular Location	Nucleus. Chromosome > Centromere > Kinetochore. Associated with kinetochores. Both nuclear and cytoplasmic in some cells. Recruited to sites of DNA damage, such as double stand breaks. Methylation of histone H4 at 'Lys-20' is required for efficient localization to double strand breaks.
Conjugation	Unconjugated
Epitope	Phospho Thr543
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

WB (Western Blot)
Western blot analysis of Phospho-53BP1 (Thr543) using COLO205 whole cell lysates

IF (Immunofluorescence)
AAA323705 staining COS7 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-53BP1 antibody	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, PubMed:22553214, PubMed:23333306, PubMed:17190600, PubMed:21144835, PubMed:28241136). 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:23727112, PubMed:23333306). 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:23760478, PubMed:28241136, PubMed:17190600). Required for immunoglobulin class-switch recombination (CSR) during antibody genesis, a process that involves the generation of DNA DSBs (PubMed:23345425). Participates to 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). Subunit Structure: Homoligomer (PubMed:16294047, PubMed:23760478, PubMed:23345425). Interacts with p53/TP53 (via the central domain) (PubMed:12110597, PubMed:11877378). Interacts with DCLRE1C (PubMed:15574327). Interacts with histone H2AFX and this requires phosphorylation of H2AFX on 'Ser-139' (PubMed:12607005). Interacts with histone H4 that has been dimethylated at 'Lys-20' (H4K20me2) (PubMed:17190600). Has low affinity for histone H4 containing monomethylated 'Lys-20' (H4K20me1) (PubMed:17190600). Does not bind histone H4 containing unmethylated or trimethylated 'Lys-20' (H4K20me3) (PubMed:17190600). Has low affinity for histone H3 that has been dimethylated on 'Lys-79' (PubMed:15525939). Has very low affinity for histone H3 that has been monomethylated on 'Lys-79' (in vitro) (PubMed:15525939). Does not bind unmethylated histone H3 (PubMed:15525939). Interacts with histone H2A monoubiquitinated at 'Lys-15' (H2AK15Ub) (PubMed:23760478). Interacts with MUM1/EXPAND1 (PubMed:20347427). Interacts with CHEK2; modulates CHEK2 phosphorylation at 'Thr-68' in response to infrared (PubMed:12364621). Interacts with MSL1; this interaction may be required for MSL1 DNA repair activity, but not for histone acetyltransferase activity (PubMed:19650074). Interacts (when phosphorylated by ATM) with RIF1 (PubMed:23727112, PubMed:23333306, PubMed:28241136). Interacts (via the Tudor-like domain) with NUDT16L1/TIRR; interaction masks the Tudor-like domain and prevents recruitment to chromatin (PubMed:28241136). Interacts with PAXIP1 (PubMed:23727112). Interacts with IFI202A (By similarity). Post-translational Modifications: Asymmetrically dimethylated on Arg residues by PRMT1. Methylation is required for DNA binding. Phosphorylated at basal level in the absence of DNA damage (PubMed:11042216, PubMed:11331310). Phosphorylated by ATM in response to DNA damage: phosphorylation at different sites promotes interaction with different set of proteins: phosphorylation at the N-terminus by ATM (residues from 6-178) promotes interaction with PAXIP1 and non-homologous end joining (NHEJ) of dysfunctional telomeres (PubMed:23727112). Phosphorylation by ATM at residues that are located more C-terminus (residues 300-650) leads to promote interaction with RIF1 (PubMed:23727112, PubMed:23333306, PubMed:28241136). Interaction with RIF1 leads to disrupt interaction with NUDT16L1/TIRR (PubMed:28241136). Phosphorylation at Thr-1609 and Ser-1618 in the UDR motif blocks interaction with H2AK15ub (PubMed:24703952). Dephosphorylated by PPP4C (PubMed:24703952). Hyperphosphorylation during mitosis correlates with its exclusion from chromatin and DNA lesions. Hyperphosphorylated in an ATR-dependent manner in response to DNA damage induced by UV irradiation (PubMed:17553757, PubMed:21144835). Dephosphorylated by PPP5C (PubMed:19176521). Similarity: The Tudor-like region mediates binding to histone H4 dimethylated at 'Lys-20' (H4K20me2) (PubMed:17190600). Interaction with NUDT16L1/TIRR masks the Tudor-like domain and prevents recruitment to chromatin (PubMed:28241136).The UDR (ubiquitin-dependent recruitment) motif specifically recognizes and binds histone H2A monoubiquitinated at 'Lys-15' (H2AK15ub) (PubMed:23760478, PubMed:24703952). Phosphorylation of the UDR blocks interaction with H2AK15ub (PubMed:24703952).

NCBI AND UNIPROT INFORMATION

NCBI GI #	213972634
NCBI GeneID	7158
NCBI Accession #	NP_001135451.1
NCBI GenBank Nucleotide #	NM_001141979.2
UniProt Accession #	Q12888; Q2M1Z7; Q4LE46; Q5FWZ3; Q7Z3U4; F8VY86
Molecular Weight	Observed: 220 kD Predicted: 214 kDa
NCBI Official Full Name	TP53-binding protein 1 isoform 2
NCBI Official Synonym Full Names	tumor protein p53 binding protein 1
NCBI Official Symbol	TP53BP1
NCBI Official Synonym Symbols	p202; 53BP1; TDRD30; p53BP1
NCBI Protein Information	TP53-binding protein 1
UniProt Protein Name	TP53-binding protein 1
UniProt Gene Name	**TP53BP1**
UniProt Synonym Gene Names	p53-binding protein 11 PublicationManual assertion based on opinion iniRef.1; p53BP1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: https://stage.aaabiotech.com/polyclonal/53bp1-antibody-immunocytochemistry-immunofluorescence-western-blot-elisa/323705