

TP53BP1

Reactivity:Human Mouse Rat

Tested applications:WB IHC IF

Recommended Dilution:WB 1:500 - 1:2000 IHC 1:50 - 1:100 IF 1:20 - 1:50

Calculated MW:450kDa

Observed MW:Refer to Figures

Immunogen:

A synthetic peptide of human TP53BP1

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonym:

53BP1; FLJ41424; MGC138366; p202;

Catalog #:A0119

Antibody Type:

Polyclonal Antibody

Species:Rabbit

Gene ID:7158

Isotype:IgG

Swiss Prot:Q12888

Purity:Affinity purification

For research use only.

Background:

p53-binding protein 1 (53BP1) was originally identified as a p53 binding partner that could enhance the transcriptional activity of p53. 53BP1 consists of two BRCA1 carboxy terminal (BRCT) domains that allow for binding to p53 and a separate domain responsible for binding to phosphorylated histone H2A.X. 53BP1 rapidly translocates to nuclear foci following treatment of cells with ionizing radiation (IR) or radiomimetic agents that cause DNA double strand breaks (DSBs). Because of this localization to DSBs and homology to the yeast protein Rad9, a role for 53BP1 in DSB repair has been proposed. Recruitment of 53BP1 to sites of DNA damage has been demonstrated to be independent of ATM, NBS1, and DNA-PK and retention of 53BP1 at DNA breaks requires phosphorylated H2A.X. In cells lacking 53BP1, phosphorylation of ATM substrates is reduced, suggesting that 53BP1 is upstream of ATM. In response to IR, phosphorylation of 53BP1 at serines 6, 25, 29, and 784 by ATM has been demonstrated, but phosphorylation at these sites is not required for localization of 53BP1 to sites of DSBs. Phosphorylation of 53BP1 at Ser1618 has been reported to be enriched in human cells arrested in mitosis.

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