

53BP2 (H-4): sc-398311

BACKGROUND

The p53 binding proteins 53BP1 and 53BP2 (Bbp) bind to the central DNA-binding domain of wild type p53, but do not bind mutant p53. The central DNA-binding domain of p53 is required for site-specific DNA binding and is frequently mutated in malignant tumors. Binding of 53BP1 to the L3 loop of p53 and of 53BP2 to the L2 loop of p53 confirms that the loop is dependent on p53 conformation. Site-specific binding also suggests that 53BP1 and 53BP2 are involved in p53-mediated tumor suppression. 53BP1 was isolated from H258 cells and is expressed in Jurkat cells in both the cytoplasm and the nucleus. The N-terminus of 53BP2 is localized to the cytoplasm, while the C-terminus might be localized in the nucleus. 53BP1 promotes cell proliferation by binding to p202, whereas 53BP2 induces cell death by binding to Bcl2 and NFκB p65.

REFERENCES

1. Iwabuchi, K., et al. 1994. Two cellular proteins that bind to wild-type but not mutant p53. *Proc. Natl. Acad. Sci. USA* 91: 6098-6102.
2. Gorina, S., et al. 1996. Structure of the p53 tumor suppressor bound to the ankyrin and SH3 domains of 53BP2. *Science* 274: 1001-1005.
3. Naumovski, L., et al. 1996. The p53-binding protein 53BP2 also interacts with Bcl12 and impedes cell cycle progression at G₂/M. *Mol. Cell. Biol.* 16: 3884-3892.

CHROMOSOMAL LOCATION

Genetic locus: TP53BP2 (human) mapping to 1q41.

SOURCE

53BP2 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-19 at the N-terminus of 53BP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

53BP2 (H-4) is available conjugated to agarose (sc-398311 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398311 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398311 PE), fluorescein (sc-398311 FITC), Alexa Fluor® 488 (sc-398311 AF488), Alexa Fluor® 546 (sc-398311 AF546), Alexa Fluor® 594 (sc-398311 AF594) or Alexa Fluor® 647 (sc-398311 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398311 AF680) or Alexa Fluor® 790 (sc-398311 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398311 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

53BP2 (H-4) is recommended for detection of 53BP2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

53BP2 (H-4) is also recommended for detection of 53BP2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for 53BP2 siRNA (h): sc-37457, 53BP2 shRNA Plasmid (h): sc-37457-SH and 53BP2 shRNA (h) Lentiviral Particles: sc-37457-V.

Molecular Weight of 53BP2 short isoform: 137 kDa.

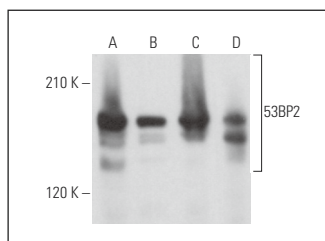
Molecular Weight of 53BP2 long isoform: 150 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, Jurkat whole cell lysate: sc-2204 or T-47D cell lysate: sc-2293.

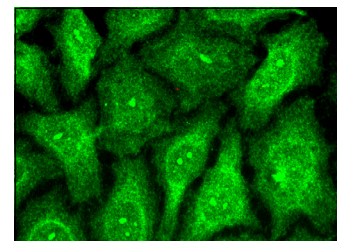
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



53BP2 (H-4): sc-398311. Western blot analysis of 53BP2 expression in WI-38 (A), Jurkat (B), T-47D (C) and NTERA-2 cl.D1 (D) whole cell lysates.



53BP2 (H-4): sc-398311. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Wang, W., et al. 2021. Single-cell proteomic profiling identifies nanoparticle enhanced therapy for triple negative breast cancer stem cells. *Cells* 10: 2842.

RESEARCH USE

For research use only, not for use in diagnostic procedures.