

# 53BP2 (DX54.10): sc-53861

## BACKGROUND

The p53 binding proteins 53BP1 and 53BP2 (Bbp) bind to the central DNA-binding domain of wildtype 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 Bcl-2 and NFκB p65.

## CHROMOSOMAL LOCATION

Genetic locus: TP53BP2 (human) mapping to 1q41; Trp53bp2 (mouse) mapping to 1 H5.

## SOURCE

53BP2 (DX54.10) is a mouse monoclonal antibody raised against amino acids 691-1128 of recombinant 53BP2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

53BP2 (DX54.10) is available conjugated to agarose (sc-53861 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53861 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53861 PE), fluorescein (sc-53861 FITC), Alexa Fluor® 488 (sc-53861 AF488), Alexa Fluor® 546 (sc-53861 AF546), Alexa Fluor® 594 (sc-53861 AF594) or Alexa Fluor® 647 (sc-53861 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53861 AF680) or Alexa Fluor® 790 (sc-53861 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

53BP2 (DX54.10) is recommended for detection of 53BP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for 53BP2 siRNA (h): sc-37457, 53BP2 siRNA (m): sc-37458, 53BP2 shRNA Plasmid (h): sc-37457-SH, 53BP2 shRNA Plasmid (m): sc-37458-SH, 53BP2 shRNA (h) Lentiviral Particles: sc-37457-V and 53BP2 shRNA (m) Lentiviral Particles: sc-37458-V.

Molecular Weight of 53BP2 short isoform: 137 kDa.

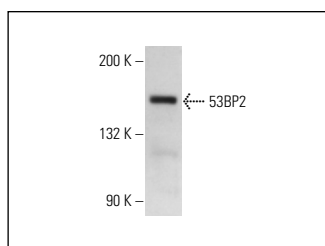
Molecular Weight of 53BP2 long isoform: 150 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260 or MCF7 whole cell lysate: sc-2206.

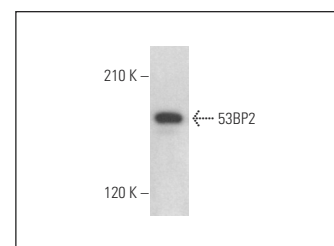
## RECOMMENDED SUPPORT REAGENTS

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 (DX54.10): sc-53861. Western blot analysis of 53BP2 expression in WI-38 whole cell lysate.



53BP2 (DX54.10): sc-53861. Western blot analysis of 53BP2 expression in MCF7 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Song, B., et al. 2015. Downregulation of ASPP2 in pancreatic cancer cells contributes to increased resistance to gemcitabine through autophagy activation. *Mol. Cancer* 14: 177.
- Richter, A.M., et al. 2019. RASSF10 is a TGFβ-target that regulates ASPP2 and E-cadherin expression and acts as tumor suppressor that is epigenetically downregulated in advanced cancer. *Cancers* 11: 1976.
- Pelicci, S., et al. 2023. Correlative multi-modal microscopy: a novel pipeline for optimizing fluorescence microscopy resolutions in biological applications. *Cells* 12: 354.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.