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antibody and ELISA experts

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Anti-53BP1/TP53BP1 Antibody

Catalog Number: PA1976

About TP53BP1

TP53BP1 (Tumor Protein p53-Binding Protein 1), also called 53BP1, is a protein that in humans is encoded by the TP53BP1 gene. Iwabuchi et al. (1998) mapped the TP53BP1 gene to 15q15-q21 by FISH. Iwabuchi et al. (1994) showed that TP53BP1 binds to the conformationally sensitive central domain of wildtype p53 but not to mutant p53 in vitro. Immunoblot analysis by Iwabuchi et al. (1998) showed that expression of TP53BP1 or TP53BP2 enhances the transactivation function of p53 and induces the expression of p21 (CDKN1A). Wang et al. (2002) used small interfering RNA directed against TP53BP1 in mammalian cells to demonstrate that TP53BP1 is a key transducer of the DNA damage checkpoint signal. TP53BP1 was required for p53 accumulation, G2/M checkpoint arrest, and the intra-S-phase checkpoint in response to ionizing radiation.

Overview

Product Name	Anti-53BP1/TP53BP1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-53BP1/TP53BP1 Antibody catalog # PA1976. Tested in IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q12888

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human 53BP1, identical to the related mouse sequence.
Predicted Reactive Species	Hamster
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat Immunocytochemistry , 0.5-1ug/ml, Human

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Anti-53BP1/TP53BP1 Antibody (PA1976) Images

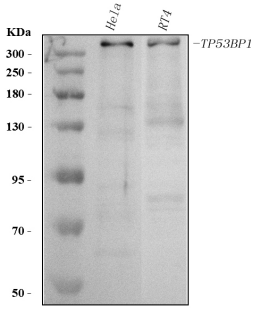

Figure 1. Western blot analysis of TP53BP1 using anti-TP53BP1 antibody (PA1976).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human RT4 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TP53BP1 antigen affinity purified polyclonal antibody (Catalog # PA1976) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for TP53BP1 at approximately 450 kDa. The expected band size for TP53BP1 is at 214 kDa.

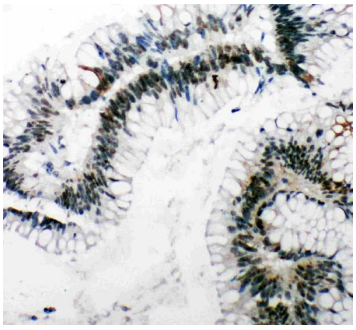

Figure 2. IHC analysis of TP53BP1 using anti-TP53BP1 antibody (PA1976).
TP53BP1 was detected in a paraffin-embedded section of Human Intestinal Cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-TP53BP1 Antibody (PA1976) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

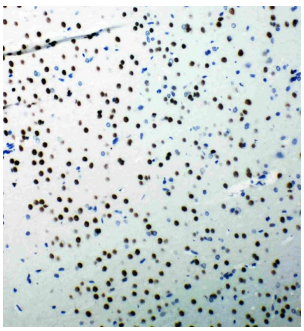

Figure 3. IHC analysis of TP53BP1 using anti-TP53BP1 antibody (PA1976).
TP53BP1 was detected in a paraffin-embedded section of Rat Brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-TP53BP1 Antibody (PA1976) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 4. IHC analysis of TP53BP1 using anti-TP53BP1

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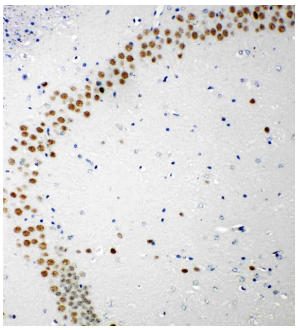

antibody (PA1976).
TP53BP1 was detected in a paraffin-embedded section of Mouse Brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-TP53BP1 Antibody (PA1976) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

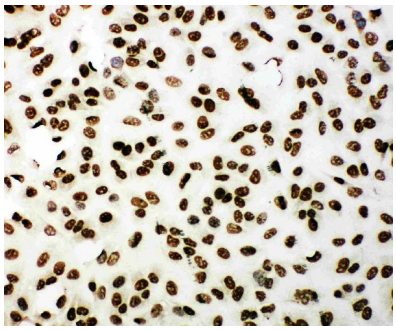

Figure 5. ICC analysis of TP53BP1 using anti-TP53BP1 antibody (PA1976).
TP53BP1 was detected in an immunocytochemical section of A549 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 1 ug/ml rabbit anti-TP53BP1 Antibody (PA1976) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.