

Anti-XRCC4 Antibody Picoband™

Catalog Number: PB9908

About XRCC4

DNA repair protein XRCC4, also known as X-ray repair cross-complementing protein 4 or XRCC4, is a protein that in humans is encoded by the XRCC4 gene. In addition to humans, the XRCC4 protein is also expressed in many other metazoans, fungi and in plants. The X-ray repair cross-complementing protein 4 is one of several coreproteins involved in the non-homologous end joining (NHEJ) pathway to repair DNA double strand breaks (DSBs). Since XRCC4 is the key protein that enables interaction of LigIV to damaged DNA and therefore ligation of the ends, mutations in the XRCC4 gene were found to cause embryonic lethality in mice and developmental inhibition and immunodeficiency in humans. Furthermore, certain mutations in the XRCC4 gene are associated with an increased risk of cancer.

Overview

Product Name	Anti-XRCC4 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-XRCC4 Antibody Picoband™ catalog # PB9908. Tested in IHC, WB applications. This antibody reacts with Human.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 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	Q13426

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human XRCC4, different from the related mouse sequence by four amino acids.
Predicted Reactive Species	Bovine, Horse, Monkey, Rabbit
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).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

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: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat Western blot, 0.1-0.5ug/ml, Human

Anti-XRCC4 Antibody Picoband™ (PB9908) Images

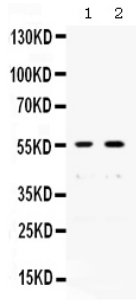


Figure 1. Western blot analysis of XRCC4 using anti-XRCC4 antibody (PB9908).

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: SW620 whole cell lysates,

Lane 2: A431 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-XRCC4 antigen affinity purified polyclonal antibody (Catalog # PB9908) 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 XRCC4 at approximately 55 kDa. The expected band size for XRCC4 is at 38 kDa.

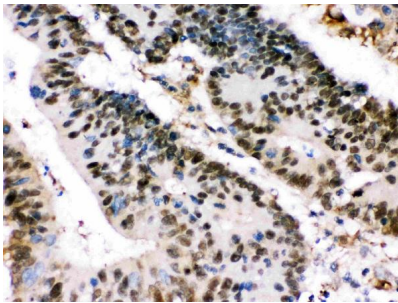


Figure 2. IHC analysis of XRCC4 using anti-XRCC4 antibody (PB9908).

XRCC4 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-XRCC4 Antibody (PB9908) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

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