

Anti-Rad51 Antibody Picoband®

Catalog Number: PB9323

About RAD51

DNA repair protein RAD51 homolog 1, also known as RAD51A, is a human gene. The Rad51 gene, HsRAD51, is a homolog of RecA of Escherichia coli and functions in recombination and DNA repair. BRCA1 and BRCA2 proteins form a complex with Rad51, and these genes are thought to participate in a common DNA damage response pathway associated with the activation of homologous recombination and double-strand break repair. RAD51 is also found to interact with BRCA1 and BRCA2, which may be important for the cellular response to DNA damage. BRCA2 is shown to regulate both the intracellular localization and DNA-binding ability of this protein. Loss of these controls following BRCA2 inactivation may be a key event leading to genomic instability and tumorigenesis.

Overview

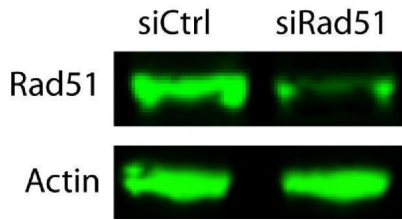
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| Product Name | Anti-Rad51 Antibody Picoband® |
| Reactive Species | Human, Mouse, Rat |
| Description | Boster Bio Anti-Rad51 Antibody Picoband® catalog # PB9323. Tested in WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application | WB |
| Clonality | Polyclonal |
| Formulation | Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , and 0.05 mg Na ₃ N. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required. |
| 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 | Q06609 |

Technical Details

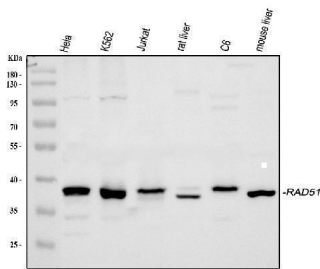
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| Immunogen | E.coli-derived human Rad51 recombinant protein (Position: M1-E258). Human Rad51 shares 98% amino acid (aa) sequence identity with mouse Rad51. |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western |

| | |
|---------------------|---|
| | blot. |
| 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 | Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat |

Anti-Rad51 Antibody Picoband® (PB9323) Images



Western blot analysis of Rad51 using anti-Rad51 antibody (PB9323). 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. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% BSA in tbs for 2 hour at RT. The membrane was incubated with anti-Rad51 antibody (PB9323) at 1:2000 at 4°C overnight, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a LICOR secondary antibody at a dilution of 1:2000 for 2 hour rotating at RT. The signal is developed using a LICOR Odyssey. A specific band was detected for Rad51 at approximately 36 kDa. The expected band size for Rad51 is at 36 kDa.



Western blot analysis of Rad51 using anti-Rad51 antibody (PB9323). 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 K562 whole cell lysates, Lane 3: human Jurkat whole cell lysates, Lane 4: rat liver tissue lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse liver tissue 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-Rad51 antigen affinity purified polyclonal antibody (Catalog # PB9323) 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 Rad51 at approximately 37 kDa. The expected band size for Rad51 is at 37 kDa.

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Anti-Rad51 Antibody

For Research Use Only. Not for use in diagnostic procedures.