BOSTER
antibody and ELISA experts

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Anti-BubR1/BUB1B Antibody Picoband®

Catalog Number: A01564-1

About BUB1B

Mitotic checkpoint serine/threonine-protein kinase BUB1 beta is an enzyme that in humans is encoded by the BUB1B gene. This gene encodes a kinase involved in spindle checkpoint function. The protein has been localized to the kinetochore and plays a role in the inhibition of the anaphase-promoting complex/cyclosome (APC/C), delaying the onset of anaphase and ensuring proper chromosome segregation. Impaired spindle checkpoint function has been found in many forms of cancer.

Overview

Product Name	Anti-BubR1/BUB1B Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-BubR1/BUB1B Antibody Picoband® catalog # A01564-1. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, 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	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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	O60566

Technical Details

Immunogen	E.coli-derived human BubR1/BUB1B recombinant protein (Position: K26-E448).
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
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, -

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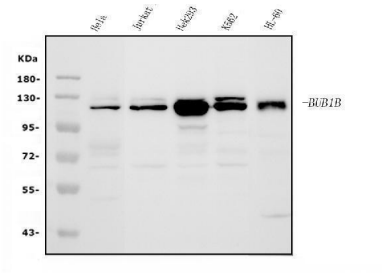
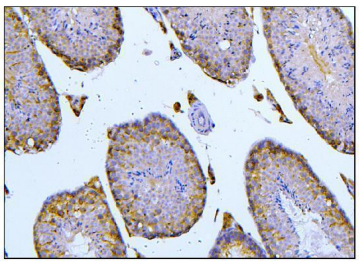
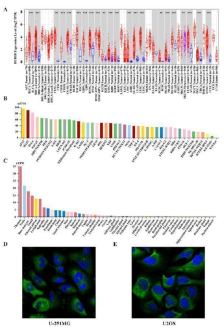
Anti-BubR1/BUB1B Antibody Picoband® (A01564-1) Images



Western blot analysis of BubR1/BUB1B using anti-BubR1/BUB1B antibody (A01564-1). 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 30ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human Hek293 whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: human HL-60 whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-BubR1/BUB1B antigen affinity purified polyclonal antibody (Catalog # A01564-1) at 0.25 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 BubR1/BUB1B at approximately 120-130KD. The expected band size for BubR1/BUB1B is at 120-130KD.



IHC analysis of BubR1/BUB1B using anti-BubR1/BUB1B antibody (A01564-1). BubR1/BUB1B was detected in paraffin-embedded section of mouse testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BubR1/BUB1B Antibody (A01564-1) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



Pan-cancer analysis of BUB1B expression. (A) Differential expression of BUB1B between tumor and normal tissues in pan-cancer analysis. (B , C) Expression of BUB1B in various cancer cell lines and tissues. (D,E) Cellular localization of BUB1B from U-251MG and U2OS. ** p < 0.01, *** p < 0.001.Index in PubMed under a CC BY license. PMID: 40076684

BUB1B expression correlates with overall survival time (OS). GEPIA2 analyses of the association between BUB1B expression and OS in (A) ACC, (B) KIRC, (C) KIRP, (D) LGG, (E) LIHC, (F) LUAD, (G) MESO, (H) PAAD, (I) SARC,

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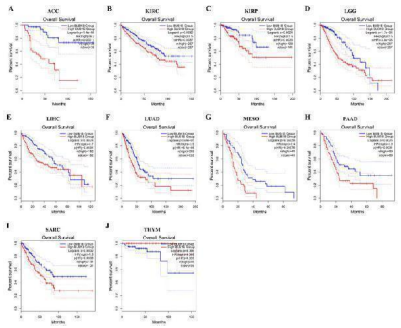

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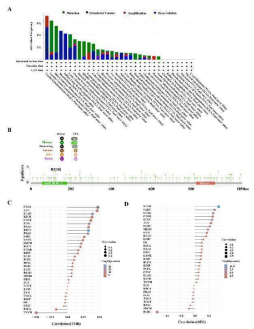
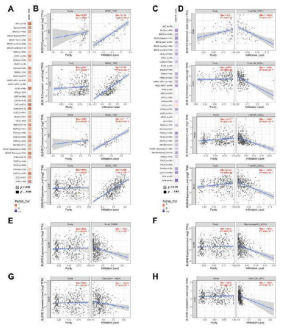
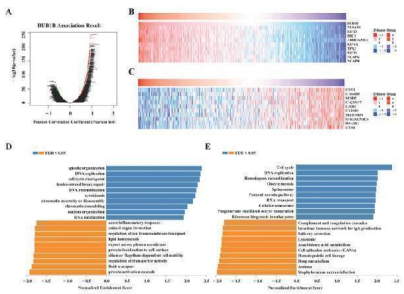


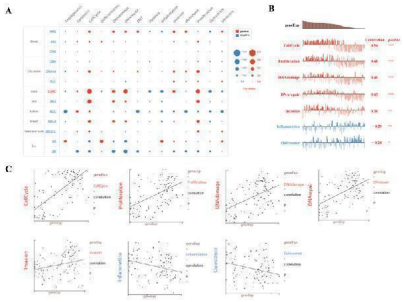
Correlation between BUB1B expression and mutations in various cancer types. (A) Landscape of BUB1B mutation in 32 cancer types, (B) the subtypes and distributions of BUB1B somatic mutations, (C , D) Spearman correlation analysis for TMB, MSI, and BUB1B gene expression. In the figure, the horizontal axis represents the correlation coefficient between the genes and TMB, and the vertical axis represents the different tumors. The size of the dots in the figure represents the correlation coefficient, and the different colors represent the significance of the p value. The bluer the color in the diagram, the smaller the p value.Index in PubMed under a CC BY license. PMID: 40076684



The association between BUB1B expression and immune cell infiltration. (A , B) BUB1B expression is positively associated with MDSC infiltration in pan-cancer. (C , D) BUB1B expression is positively negative with NKT cell infiltration in pan-cancer. (E – H) BUB1B expression is negative associated with the infiltration level of B cells, macrophage cells, CD4+ T cells, and CD8+ T cells.Index in PubMed under a CC BY license. PMID: 40076684



The enrichment analysis of BUB1B co-expression genes in LUAD. (A) The BUB1B co-expression genes in LUAD. (B , C) The top 50 genes positively and negatively correlated to BUB1B. (D , E) GO and KEGG analysis of BUB1B co-expression genes in the LUAD cohort.Index in PubMed under a CC BY license. PMID: 40076684



Function of BUB1B in LUAD determined using the CancerSEA database. (A) Analysis from the CancerSEA database at single-cell resolution indicated that BUB1B was primarily involved in cell cycle, proliferation, DNA damage, DNA repair, invasion, inflammation, quiescence. (B , C) Functional relevance in LUAD, BUB1B expression was significantly positively correlated with cell cycle, proliferation, DNA damage, DNA repair, invasion, and was negatively correlated with inflammation, quiescence. The experiments were repeated three times. (* $p < 0.05$, ** $p <$

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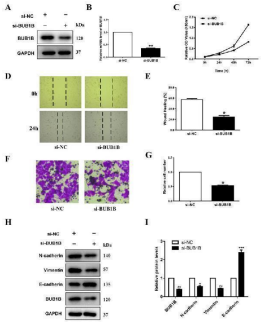
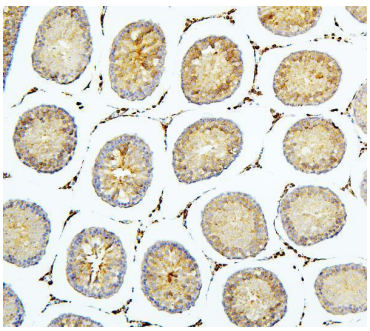
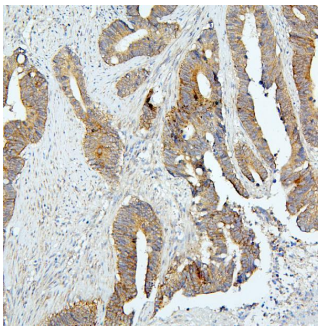


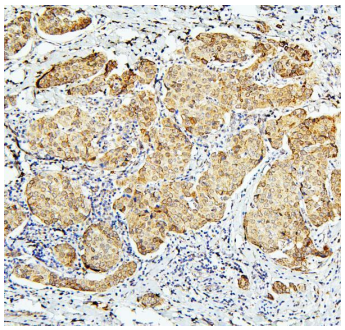
Cellular functions of BUB1B. (A , B) Western blot and RT-qPCR detection after siRNA-mediated knockdown of BUB1B in A549 cells. (C) CCK-8 assay results showing the decrease in the viability of A549 cells upon the knockdown of BUB1B. (D , E) Wound healing test. (F , G) Transwell assay results showing the decrease in the migration in A549 cells upon the knockdown of BUB1B. (H , I) Western blot results showing the decrease in the EMT progression in A549 cells upon the knockdown of BUB1B. All experiments were repeated three times with three replicates for each repeat. * p < 0.05, ** p < 0.01, and *** p < 0.001.Index in PubMed under a CC BY license. PMID: 40076684



IHC analysis of BUB1B using anti-BUB1B antibody (A01564-1). BUB1B was detected in paraffin-embedded section of rat testis tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BUB1B Antibody (A01564-1) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of BUB1B using anti-BUB1B antibody (A01564-1). BUB1B was detected in paraffin-embedded section of human colon cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BUB1B Antibody (A01564-1) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



IHC analysis of BUB1B using anti-BUB1B antibody (A01564-1). BUB1B was detected in paraffin-embedded section of human mammary cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BUB1B Antibody (A01564-1) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

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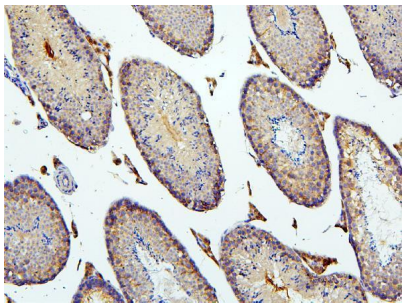
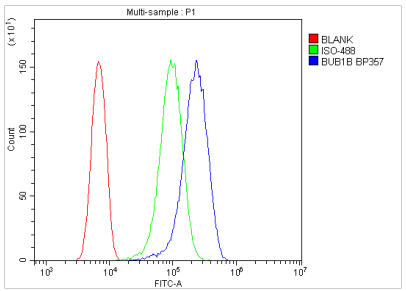
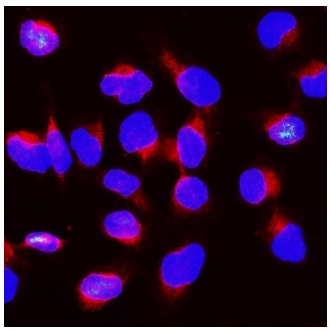


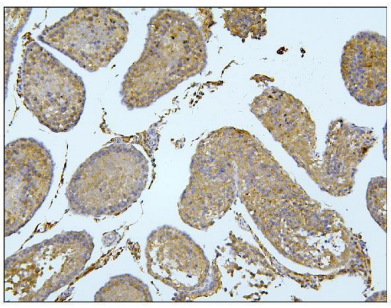
IHC analysis of BUB1B using anti-BUB1B antibody (A01564-1). BUB1B was detected in paraffin-embedded section of mouse testis tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BUB1B Antibody (A01564-1) 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 Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of U87 cells using anti-Calpain 2 antibody (A03492). Overlay histogram showing U87 cells stained with A03492 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Calpain 2 Antibody (A03492, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



IF analysis of BubR1/BUB1B using anti-BubR1/BUB1B antibody (A01564-1). BubR1/BUB1B was detected in immunocytochemical section of U20S 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 2ug/mL rabbit anti-BubR1/BUB1B Antibody (A01564-1) overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG (BA1142) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IHC analysis of BubR1/BUB1B using anti-BubR1/BUB1B antibody (A01564-1). BubR1/BUB1B was detected in paraffin-embedded section of rat testis tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BubR1/BUB1B Antibody (A01564-1) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

IHC analysis of BubR1/BUB1B using anti-BubR1/BUB1B antibody (A01564-1). BubR1/BUB1B was detected in paraffin-

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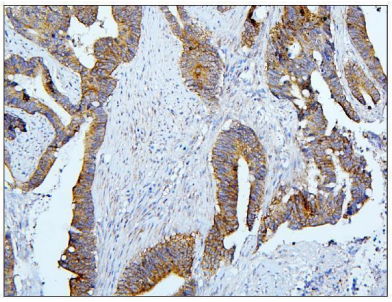
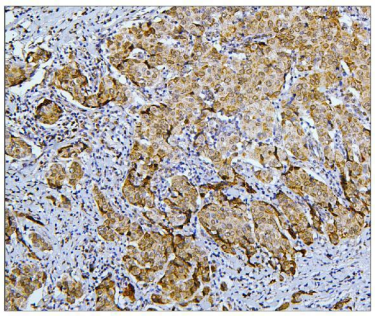


embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BubR1/BUB1B Antibody (A01564-1) overnight 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of BubR1/BUB1B using anti-BubR1/BUB1B antibody (A01564-1). BubR1/BUB1B was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-BubR1/BUB1B Antibody (A01564-1) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Anti-BubR1/BUB1B Antibody

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