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Anti-TRIM16 Antibody Picoband®

Catalog Number: A09514-4

About Trim16

Tripartite motif-containing protein 16 is a protein that in humans is encoded by the TRIM16 gene. This gene was identified as an estrogen and anti-estrogen regulated gene in epithelial cells stably expressing estrogen receptor. The protein encoded by this gene contains two B box domains and a coiled-coiled region that are characteristic of the B box zinc finger protein family. The proteins of this family have been reported to be involved in a variety of biological processes including cell growth, differentiation and pathogenesis. Expression of this gene was detected in most tissues. Its function, however, has not yet been determined.

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Overview

Product Name	Anti-TRIM16 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-TRIM16 Antibody Picoband® catalog # A09514-4. Tested in ELISA, IF, IHC, ICC, WB applications. This antibody reacts with 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, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
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	Q99PP9

Technical Details

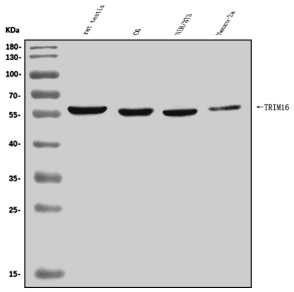
Immunogen	E.coli-derived mouse TRIM16 recombinant protein (Position: D65-K210).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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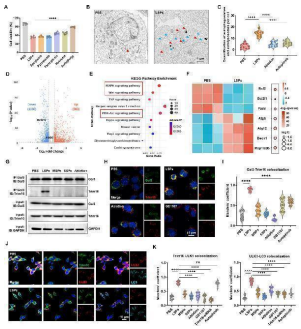
	blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5ug/ml, Mouse ELISA, 0.1-0.5ug/ml, -

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Anti-TRIM16 Antibody Picoband® (A09514-4) Images



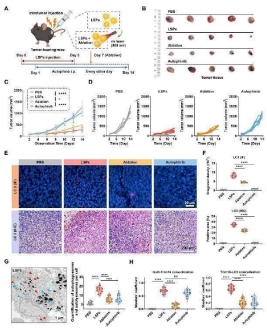
Western blot analysis of TRIM16 using anti-TRIM16 antibody (A09514-4). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions. Lane 1: rat testis tissue lysates, Lane 2: rat C6 whole cell lysates, Lane 3: mouse NIH/3T3 whole cell lysates, Lane 4: mouse Neuro-2a 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-TRIM16 antigen affinity purified polyclonal antibody (Catalog # A09514-4) 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 TRIM16 at approximately 63KD. The expected band size for TRIM16 is at 63KD.



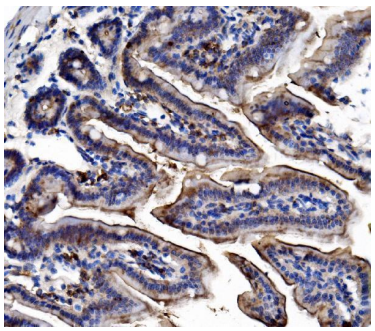
LSPs induce autophagic cell death via the Gal3-Trim16 signaling axis. A) Cell viability of LLC cells after treatment with LSPs (32.77 μg mL−1) for 24 h or different cell death pathway inhibitors. Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****). B,C) Bio-TEM images (B) and quantification of autophagosomes and autolysosomes (C) of LLC cells treated with LSPs (32.77 μg mL−1), LSPs plus laser ablation, or Autophinib. Red arrows indicate autolysosomes, and blue arrows indicate autophagosomes. Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****). D) Volcano plot of differentially expressed genes in LLC cells under LSPs versus PBS treatment. E) KEGG pathway enrichment analysis of downregulated signaling pathways after LSPs treatment. F) Heatmap of representative genes related to apoptosis and autophagy in PBS- and LSPs-treated cells. G) Co-IP analysis of Gal3-Trim16 interaction in PBS, LSPs, MSPs, SSPs, and LSP plus laser ablation groups. H,I) Immunofluorescence staining of Gal3 (green), Trim16 (red), and Hoechst (blue) (H) and quantification by Manders' coefficient of Gal3-Trim16 colocalization efficiency (I) in LLC cells treated with LSPs, LSPs plus laser ablation, GB1107, or Autophinib. Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****). J,K) Immunofluorescence staining of Trim16 (green), ULK1 (red), and LC3 (cyan) (J) and quantification by Manders' coefficient of Trim16-ULK1 colocalization, as well as ULK1-LC3 colocalization efficiency (K) in LLC cells treated with LSPs, MSPs, SSPs, LSPs plus laser ablation, GB1107, Trim16-siRNA or Autophinib. Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****).Index in PubMed under a CC

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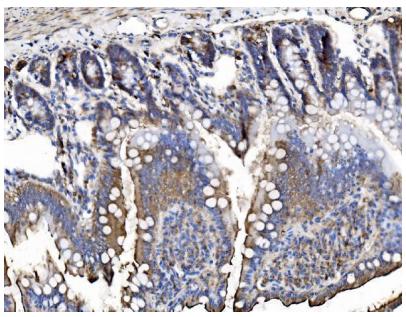
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LSPs exhibit potent anticancer efficacy in vivo, which can be terminated by pulsed laser ablation. A) Schematic of the in vivo treatment protocol involving intratumoral injection of LSPs, LSPs plus laser ablation, or Autophinib administration. B) Representative tumor images from mice treated with PBS, LSPs, LSPs plus laser ablation, or Autophinib for 14 days. C,D) Tumor volume curves (C) and individual tumor growth trajectories (D) of mice treated with PBS, LSPs, LSPs plus laser ablation, or Autophinib for 14 days. Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****). E,F) LC3 immunofluorescence (IF, top) and immunohistochemistry (IHC, bottom) staining of tumor sections from mice treated with PBS, LSPs, LSPs plus laser ablation, or Autophinib for 14 days (E), and corresponding quantification of LC3 integrated density and positive area (F). Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****). G) Bio-TEM images and quantification of autophagosomes and autolysosomes of LLC tumor tissues treated with LSPs, LSPs plus laser ablation, or Autophinib. Red arrows indicate autolysosomes, and blue arrows indicate autophagosomes. Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****). H) Quantification by Manders' coefficient of Gal3-Trim16 and Trim16-LC3 colocalization efficiency in tumor tissue sections treated with LSPs, LSPs plus laser ablation, or Autophinib based on immunofluorescence staining of Gal3 (red), Trim16 (green), and LC3 (purple). Data are presented as mean ± s.d. Statistical significance: $p < 0.05$ (*), $p < 0.01$ (**), $p < 0.001$ (***), $p < 0.0001$ (****).Index in PubMed under a CC BY license. PMID: 41082270



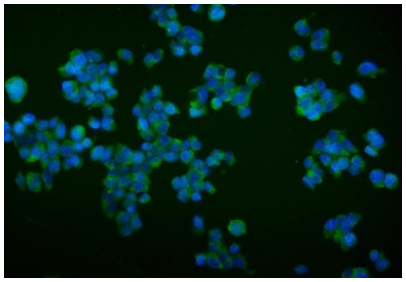
IHC analysis of TRIM16 using anti-TRIM16 antibody (A09514-4). TRIM16 was detected in paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-TRIM16 Antibody (A09514-4) 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 TRIM16 using anti-TRIM16 antibody (A09514-4). TRIM16 was detected in paraffin-embedded section of rat intestine 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 2ug/ml rabbit anti-TRIM16 Antibody (A09514-4) 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

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(SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of TRIM16 using anti-TRIM16 antibody (A09514-4). TRIM16 was detected in immunocytochemical section of HEPA1-6 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 5ug/mL rabbit anti-TRIM16 Antibody (A09514-4) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) 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.

Anti-TRIM16 Antibody

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