BOSTER BIOLOGICAL TECHNOLOGY
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Anti-METTL14 Antibody Picoband®

Catalog Number: A07389-2

About METTL14

Methyltransferase like 14 is a protein that in humans is encoded by the METTL14 gene. METTL14 is part of a methyltransferase complex required for the common N6-methyladenosine (m6A) base modification that is enriched near stop codons and in long exons of mRNAs.

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Overview

Product Name	Anti-METTL14 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-METTL14 Antibody Picoband® catalog # A07389-2. Tested in ELISA, Flow Cytometry, IP, IF, IHC, ICC, WB applications. This antibody reacts with Human. 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, IP, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.005mg 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	Q9HCE5

Technical Details

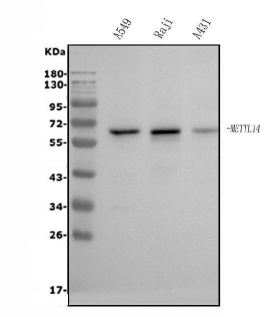
Immunogen	E.coli-derived human METTL14 recombinant protein (Position: Q12-D350).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.

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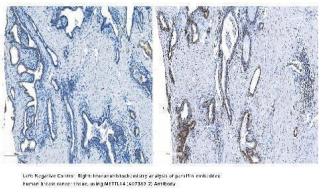
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.25ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Immunoprecipitation, 0.5-2 ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, - Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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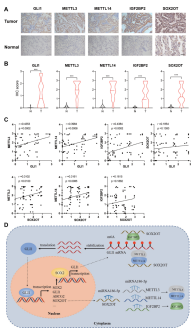
Anti-METTL14 Antibody Picoband® (A07389-2) Images



Western blot analysis of METTL14 using anti-METTL14 antibody (A07389-2). 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 50ug of sample under reducing conditions. Lane 1: human A549 whole cell lysates, Lane 2: human Raji whole cell lysates, Lane 3: human A431 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-METTL14 antigen affinity purified polyclonal antibody (Catalog # A07389-2) 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 METTL14 at approximately 65KD. The expected band size for METTL14 is at 65KD.

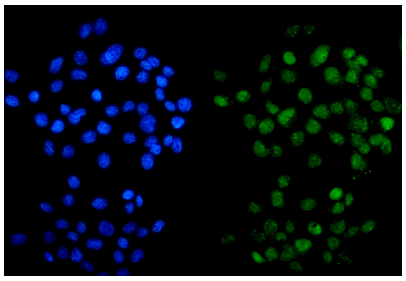


IHC analysis of METTL14 using anti-METTL14 antibody (A07389-2). METTL14 was detected in paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-METTL14 Antibody (A07389-2) 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.Left: Negative Control Right: Immunohistochemistry analysis of paraffin-embedded human breast cancer tissue, using METTL14 (A07389-2) Antibody

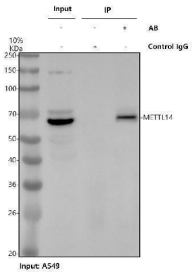


Positive correlation of the GLI1/SOX2OT loop and METTL3/14/IGF2BP2 expression at the tissue level. A Representative immunohistochemistry images of the GLI1/SOX2OT loop and METTL3/14/IGF2BP2. Magnification = ×200, Scale bar = 100 um. B Expression level of the GLI1/SOX2OT loop and METTL3/14/IGF2BP2 in paired NSCLC specimens and adjacent normal tissues. C Correlation analysis between the expression levels of GLI1 with that of METTL3, METTL14, IGF2BP2, and SOX2OT in lung cancer specimens. D Diagram illustrating the postulated molecular mechanisms of the GLI1/SOX2OT loop m6A modification in NSCLC cells. Index in PubMed under a CC BY license. PMID: 37149646

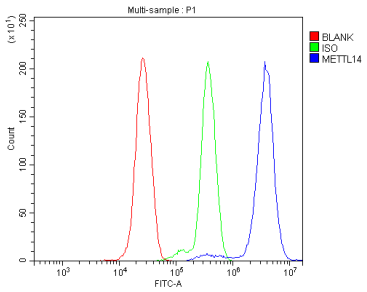
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IF analysis of METTL14 using anti-METTL14 antibody (A07389-2). METTL14 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-METTL14 Antibody (A07389-2) 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.



Immunoprecipitating (IP) METTL14 in A549 whole cell lysate. Western blot analysis of METTL14 using anti-METTL14 antibody (A07389-2); Lane 1: A549 whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-METTL14 antibody in A549 whole cell lysate; Lane 3: anti-METTL14 antibody (2ug) + A549 whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-METTL14 antigen affinity purified polyclonal antibody (A07389-2) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody ((Light chain). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for METTL14 at approximately 65 kDa. The expected band size for METTL14 is at 52 kDa.



Flow Cytometry analysis of THP-1 cells using anti-METTL14 antibody (A07389-2). Overlay histogram showing THP-1 cells stained with A07389-2 (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-METTL14 Antibody (A07389-2, 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.

Anti-METTL14 Antibody

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