

## Anti-NUDT5 Antibody Picoband®

Catalog Number: A07530

### About NUDT5

ADP-sugar pyrophosphatase is an enzyme that in humans is encoded by the NUDT5 gene. This gene belongs to the Nudix (nucleoside diphosphate linked moiety X) hydrolase superfamily. The encoded enzyme catalyzes the hydrolysis of modified nucleoside diphosphates, including ADP-ribose (ADPR) and 8-oxoGua-containing 8-oxo-dADP and 8-oxo-dGDP. Protein-bound ADP ribose can be hazardous to the cell because it can modify some amino acid residues, resulting in the inhibition of ATP-activated potassium channels. 8-oxoGua is an oxidized form of guanine that can potentially alter genetic information by pairing with adenine and cytosine in RNA. Presence of 8-oxoGua in RNA results in formation of abnormal proteins due to translational errors.

### Overview

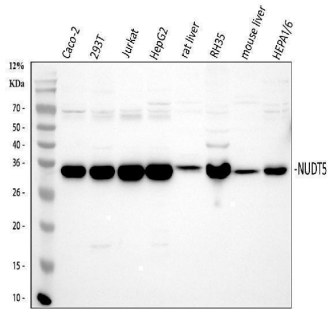
Product Name	Anti-NUDT5 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-NUDT5 Antibody Picoband® catalog # A07530. Tested in ELISA, IP, IF, IHC, ICC, WB, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a 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, IP, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	Q9UKK9

### Technical Details

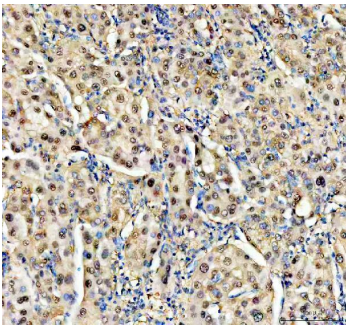
Immunogen	E.coli-derived human NUDT5 recombinant protein (Position: M1-F219).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	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 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Immunoprecipitation, 0.5-2 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10 <sup>6</sup> cells, Human ELISA, 0.1-0.5 ug/ml, -

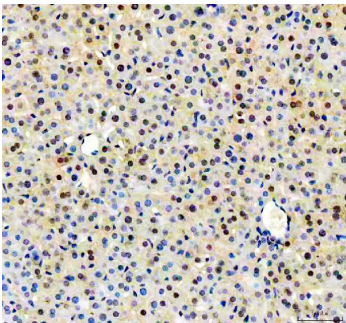
## Anti-NUDT5 Antibody Picoband® (A07530) Images



Western blot analysis of NUDT5 using anti-NUDT5 antibody (A07530). 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 CACO-2 whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human Jurkat whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: rat liver tissue lysates, Lane 6: rat RH35 whole cell lysates, Lane 7: mouse liver tissue lysates, Lane 8: mouse HEP1/6 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-NUDT5 antigen affinity purified polyclonal antibody (Catalog # A07530) 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 NUDT5 at approximately 35 kDa. The expected band size for NUDT5 is at 35 kDa.

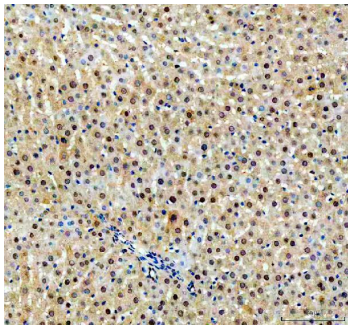


IHC analysis of NUDT5 using anti-NUDT5 antibody (A07530). NUDT5 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-NUDT5 Antibody (A07530) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

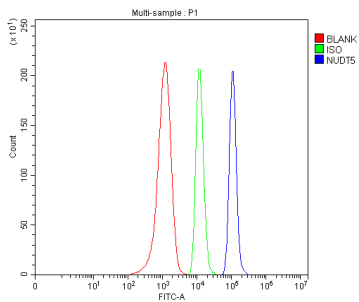


IHC analysis of NUDT5 using anti-NUDT5 antibody (A07530). NUDT5 was detected in a paraffin-embedded section of mouse liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-NUDT5 Antibody (A07530) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

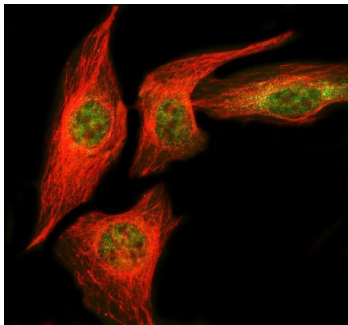
IHC analysis of NUDT5 using anti-NUDT5 antibody (A07530). NUDT5 was detected in a paraffin-embedded section of rat



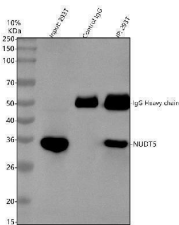
liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-NUDT5 Antibody (A07530) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Flow Cytometry analysis of CACO-2 cells using anti-NUDT5 antibody (A07530). Overlay histogram showing CACO-2 cells stained with A07530 (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-NUDT5 Antibody (A07530, 1 ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10<sup>6</sup>) 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 NUDT5 using anti-NUDT5 antibody (A07530) and anti-Beta Tubulin antibody (M01857-3). NUDT5 was detected in immunocytochemical section of U2OS cell. 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 5 ug/mL rabbit anti-NUDT5 Antibody (A07530) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Immunoprecipitating NUDT5 in 293T whole cell lysate. Western blot analysis of NUDT5 using anti-NUDT5 antibody (A07530); Lane 1: 293T whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-NUDT5 antibody in 293T whole cell lysate; Lane 3: anti-NUDT5 antibody (2ug) + 293T whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-NUDT5 antigen affinity purified polyclonal antibody (A07530) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for NUDT5 at approximately 35 kDa. The expected band size for NUDT5 is at 24 kDa.

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### Anti-NUDT5 Antibody

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