BOSTER BIOLOGICAL TECHNOLOGY
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Anti-Dicer/DICER1 Antibody Picoband®

Catalog Number: RP1044

About DICER1

Dicer (DICER1), also known as endoribonuclease Dicer or helicase with RNase motif, is an enzyme that in humans is encoded by the DICER1 gene. It is mapped to 14q32.13. The DICER1 gene, a member of the ribonuclease III (RNaseIII) family, is involved in the generation of microRNAs (miRNAs), which modulate gene expression at the posttranscriptional level. DICER1 possesses an RNA helicase motif containing a DEXH box in its amino terminus and an RNA motif in the carboxy terminus DICER, also known as helicase-MOI, is required by the RNA interference and small temporal RNA (stRNA) pathways to produce the active small RNA component that represses gene expression. In addition, DICER1 is required for formation of the RNA induced silencing complex (RISC). It also cleaves double-stranded RNA to produce short interfering RNAs (siRNAs) which target the selective destruction of complementary RNAs.

Overview

Product Name	Anti-Dicer/DICER1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Dicer/DICER1 Antibody catalog # RP1044. Tested in Flow Cytometry, IHC, 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	Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg 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	Q9UPY3

Technical Details

Immunogen	E.coli-derived human Dicer recombinant protein (Position: M1-N195). Human Dicer shares 94% amino acid (aa) sequence identity with mouse Dicer.
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

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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 Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human

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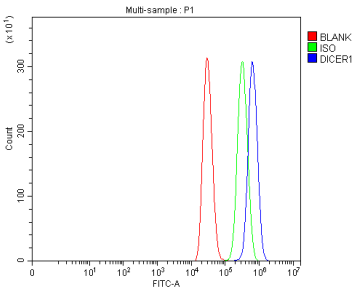
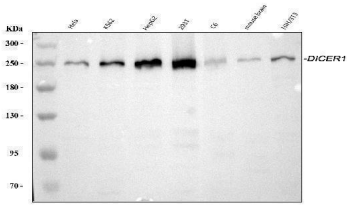
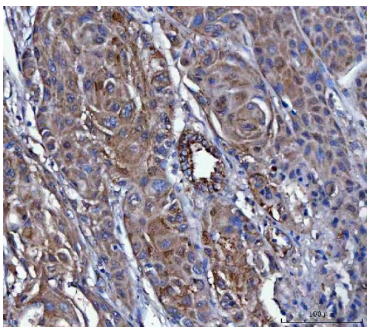
Anti-Dicer/DICER1 Antibody Picoband® (RP1044) Images



Flow Cytometry analysis of MCF-7 cells using anti-Dicer/DICER1 antibody (RP1044).Overlay histogram showing MCF-7 cells stained with RP1044 (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-Dicer/DICER1 Antibody (RP1044,1ug/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.



Western blot analysis of Dicer/DICER1 using anti-Dicer/DICER1 antibody (RP1044). 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 HepG2 whole cell lysates, Lane 4: human 293T whole cell lysates, Lane 5: rat C6 whole cell lysates, Lane 6: mouse brain tissue lysates, Lane 7: mouse NIH/3T3 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-Dicer/DICER1 antigen affinity purified polyclonal antibody (Catalog # RP1044) 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 Dicer/DICER1 at approximately 250 kDa. The expected band size for Dicer/DICER1 is at 219 kDa.



IHC analysis of Dicer/DICER1 using anti-Dicer/DICER1 antibody (RP1044). Dicer/DICER1 was detected in a paraffin-embedded section of human breast 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-Dicer/DICER1 Antibody (RP1044) 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.

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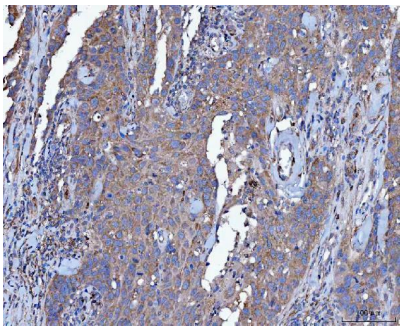
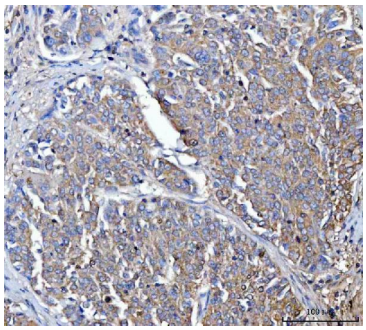


IHC analysis of Dicer/DICER1 using anti-Dicer/DICER1 antibody (RP1044). Dicer/DICER1 was detected in a paraffin-embedded section of human penis squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Dicer/DICER1 Antibody (RP1044) 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 Dicer/DICER1 using anti-Dicer/DICER1 antibody (RP1044). Dicer/DICER1 was detected in a paraffin-embedded section of human cervical 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-Dicer/DICER1 Antibody (RP1044) 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.

3 Publications Citing This Product

1. PubMed ID: -, Xiaoxiao Zhang,Peng Li,Huanhuan Zhong,Fanming Yang,Fanzhou Liu,Gabriel Yedid,Yan Zeng, Extending the L1 region in canonical double-stranded RNA-binding domains impairs their functions, Acta Biochimica et Biophysica Sinica, 2021;,gmab014, https://doi.org/10.1093/abbs/gmab014

2. PubMed ID: 25727017, Gao Y, Wang Y, Feng J, Feng G, Zheng M, Yang Z, Xiao Z, Lu Z, Ye L, Zhang X. Biochem Biophys Res Commun. 2015 Apr 3;459(2):306-12. Doi: 10.1016/J.Bbrc.2015.02.106. Epub 2015 Feb 26. A Hairpin Within Yap Mrna 3'Utr Functions In Regulation At Post-T...

3. PubMed ID: 27133296, Post-transcriptional modulation of protein phosphatase PPP2CA and tumor suppressor PTEN by endogenous siRNA cleaved from hairpin within PTEN mRNA 3'UTR in human liver cells

Visit bosterbio.com/anti-dicer-antibody-rp1044-boster.html to see all 3 publications.

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