Anti-Dicer Antibody

HA500522



Product Type: Rabbit polyclonal IgG, primary antibodies

Species reactivity: Human, Mouse WB, IF-Cell, FC Applications:

Predicted band size: 219 kDa Molecular Wt:

Description: Dicer, also known as endoribonuclease Dicer or helicase with RNase motif, is an enzyme

> that in humans is encoded by the DICER1 gene. Being part of the RNase III family, Dicer cleaves double-stranded RNA (dsRNA) and pre-microRNA (pre-miRNA) into short doublestranded RNA fragments called small interfering RNA and microRNA, respectively. These fragments are approximately 20-25 base pairs long with a two-base overhang on the 3'end. Dicer facilitates the activation of the RNA-induced silencing complex (RISC), which is essential for RNA interference. RISC has a catalytic component Argonaute, which is an

endonuclease capable of degrading messenger RNA (mRNA).

Recombinant protein within human aa 701-1,100 / 1,922. Immunogen:

Positive control: MCF-7 cell lysate, 293 cell lysate, Daudi cell lysate, MCF-7, C2C12.

Subcellular location: Cytoplasm, perinuclear region.

Database links: SwissProt: Q9UPY3 Human | Q8R418 Mouse

Recommended Dilutions:

WB 1:1,000 IF-Cell 10ug/mL FC 1ug/mL

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into

single-use upon delivery. Store at -20 °C long term.

Purity: Immunogen affinity purified.

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Images

Fig1: Western blot analysis of Dicer on different lysates with Rabbit anti-Dicer antibody (HA500522) at 1/1,000 dilution.

Lane 1: MCF-7 cell lysate Lane 2: 293 cell lysate Lane 3: Daudi cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 219 kDa Observed band size: 250 kDa

Exposure time: 2 minutes;

6% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA500522) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/300,000 dilution was used for 1 hour at room temperature.

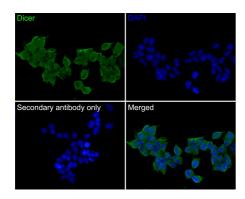


Fig2: Immunocytochemistry analysis of MCF-7 cells labeling Dicer with Rabbit anti-Dicer antibody (HA500522) at 10ug/mL dilution.

Cells were fixed in 4% paraformaldehyde for 10 minutes at 37 $^{\circ}$ C, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Rabbit anti-Dicer antibody (HA500522) at 10ug/mL dilution in 2% negative goat serum overnight at 4 $^{\circ}$ C. Goat Anti-Rabbit IgG H&L (iFluor † 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Fig3: Flow cytometric analysis of C2C12 cells labeling Dicer.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA500522, 1ug/ml) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4 $^{\circ}$ C for an hour, the cells were stained with a iFluor † M 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4 $^{\circ}$ C. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

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Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

- 1. Poirier EZ et al. An isoform of Dicer protects mammalian stem cells against multiple RNA viruses. Science. 2021 Jul
- 2. Wang Q et al. Mechanism of siRNA production by a plant Dicer-RNA complex in dicing-competent conformation. Science. 2021 Nov