

Product datasheet

Anti-Dicer antibody [EPR24104-105] ab259327

KO VALIDATED Recombinant RabMAb

[2 References](#) [9 Images](#)

Overview

Product name	Anti-Dicer antibody [EPR24104-105]
Description	Rabbit monoclonal [EPR24104-105] to Dicer
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P Unsuitable for: Flow Cyt (Intra), ICC/IF or IP
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: RAW264.7, 2.4G2, HeLa, 293T and NIH/3T3, PC-12 lysates. IHC-P: Human testis, Mouse cerebrum and testis, Rat testis tissues.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: 59.94% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR24104-105
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab259327 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Predicted molecular weight: 218 kDa.
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt (Intra), ICC/IF or IP.

Target

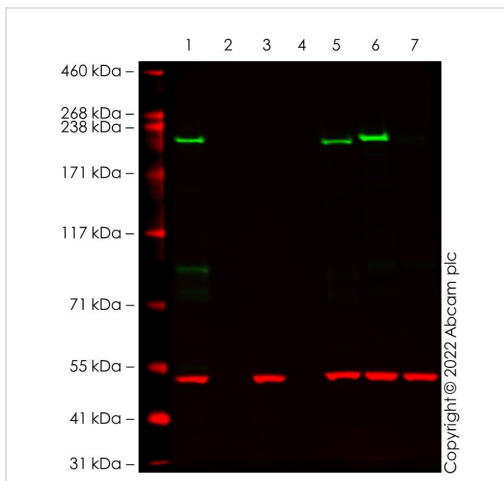
Function Double-stranded RNA (dsRNA) endoribonuclease playing a central role in short dsRNA-mediated post-transcriptional gene silencing. Cleaves naturally occurring long dsRNAs and short hairpin pre-microRNAs (miRNA) into fragments of twenty-one to twenty-three nucleotides with 3' overhang of two nucleotides, producing respectively short interfering RNAs (siRNA) and mature microRNAs. SiRNAs and miRNAs serve as guide to direct the RNA-induced silencing complex (RISC) to complementary RNAs to degrade them or prevent their translation. Gene silencing mediated by siRNAs, also called RNA interference, controls the elimination of transcripts from mobile and repetitive DNA elements of the genome but also the degradation of exogenous RNA of viral origin for instance. The miRNA pathway on the other side is a mean to specifically regulate the expression of target genes.

Involvement in disease Pleuropulmonary blastoma
Goiter multinodular 1, with or without Sertoli-Leydig cell tumors
Rhabdomyosarcoma, embryonal, 2
DICER1 mutations have been found in uterine cervix embryonal rhabdomyosarcoma, primitive neuroectodermal tumor, Wilms tumor, pulmonary sequestration and juvenile intestinal polyp (PubMed:21882293). Somatic missense mutations affecting the RNase IIIb domain of DICER1 are common in non-epithelial ovarian tumors. These mutations do not abolish DICER1 function but alter it in specific cell types, a novel mechanism through which perturbation of microRNA processing may be oncogenic (PubMed:22187960).

Sequence similarities Belongs to the helicase family. Dicer subfamily.
Contains 1 Dicer dsRNA-binding fold domain.
Contains 1 DRBM (double-stranded RNA-binding) domain.
Contains 1 helicase ATP-binding domain.
Contains 1 helicase C-terminal domain.
Contains 1 PAZ domain.
Contains 2 RNase III domains.

Cellular localization Cytoplasm.

Images



Western blot - Anti-Dicer antibody [EPR24104-105] (ab259327)

All lanes : Anti-Dicer antibody [EPR24104-105] (ab259327) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate at 20 μ g

Lane 2 : DICER1 knockout HEK-293T cell lysate at 20 μ g

Lane 3 : DICER1 4-25 knockout HEK-293T cell lysate at 20 μ g

Lane 4 : Empty

Lane 5 : HeLa cell lysate at 20 μ g

Lane 6 : Wild-type HAP1 cell lysate at 20 μ g

Lane 7 : Dicer1 knockout HAP1 cell lysate at 20 μ g

Secondary

All lanes : Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

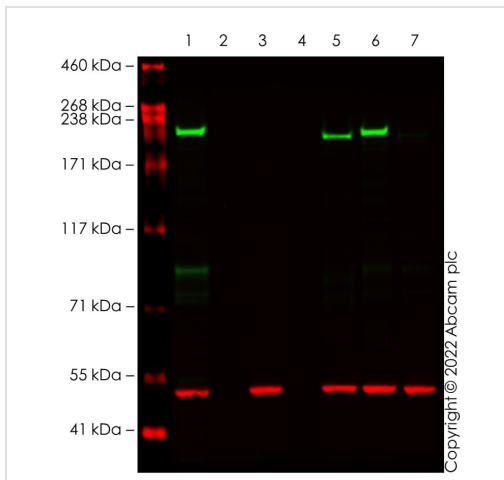
Performed under reducing conditions.

Predicted band size: 218 kDa

Observed band size: 218 kDa

False colour image of Western blot: Anti-Dicer antibody [EPR24104-105] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab259327 was shown to bind specifically to Dicer. A band was observed at 218 kDa in wild-type HEK-293T cell lysates with no signal observed at this size in DICER1 knockout cell line.

To generate this image, wild-type and DICER1 knockout HEK-293T cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-Dicer antibody [EPR24104-105] (ab259327)

All lanes : Anti-Dicer antibody [EPR24104-105] (ab259327) at 1/1000 dilution

Lane 1 : Wild-type HEK-293T cell lysate at 20 μ g

Lane 2 : DICER1 knockout HEK-293T cell lysate at 20 μ g

Lane 3 : DICER1 2-20 knockout HEK-293T cell lysate at 20 μ g

Lane 4 : Empty

Lane 5 : HeLa cell lysate at 20 μ g

Lane 6 : Wild-type HAP1 cell lysate at 20 μ g

Lane 7 : Dicer1 knockout HAP1 cell lysate at 20 μ g

Secondary

All lanes : Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution

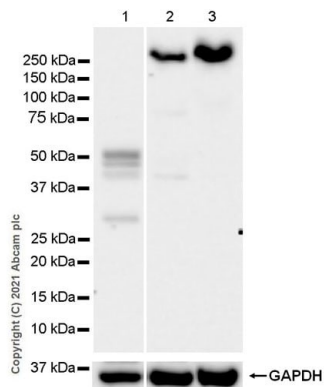
Performed under reducing conditions.

Predicted band size: 218 kDa

Observed band size: 218 kDa

False colour image of Western blot: Anti-Dicer antibody [EPR24104-105] staining at 1/1000 dilution, shown in green; Mouse anti-Alpha Tubulin [DM1A] ([ab7291](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab259327 was shown to bind specifically to Dicer. A band was observed at 218 kDa in wild-type HEK-293T cell lysates with no signal observed at this size in DICER1 knockout cell line.

To generate this image, wild-type and DICER1 knockout HEK-293T cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-Dicer antibody [EPR24104-105] (ab259327)

All lanes : Anti-Dicer antibody [EPR24104-105] (ab259327) at 1/1000 dilution

Lane 1 : THP-1 (human monocytic leukemia monocyte) whole cell lysate

Lane 2 : RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) whole cell lysate

Lane 3 : 2.4G2 (rat B cell lymphoma B lymphocyte) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

Predicted band size: 218 kDa

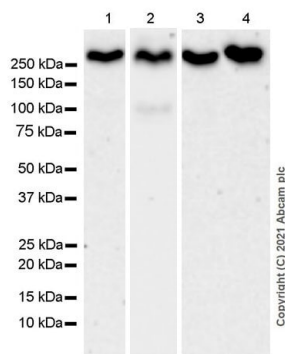
Observed band size: 250 kDa

Blocking and diluting buffer and concentration: 5% NFD/MTBST

Negative control: THP-1 (PMID:20584909).

Lysates were made freshly and used in WB test immediately to minimize protein degradation.

Exposure time: 48 seconds



Western blot - Anti-Dicer antibody [EPR24104-105] (ab259327)

All lanes : Anti-Dicer antibody [EPR24104-105] (ab259327) at 1/1000 dilution

Lane 1 : HeLa (human cervix adenocarcinoma epithelial cell) whole cell lysate

Lane 2 : 293T (human embryonic kidney epithelial cell) whole cell lysate

Lane 3 : NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Lane 4 : PC-12 (rat adrenal gland pheochromocytoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

Predicted band size: 218 kDa

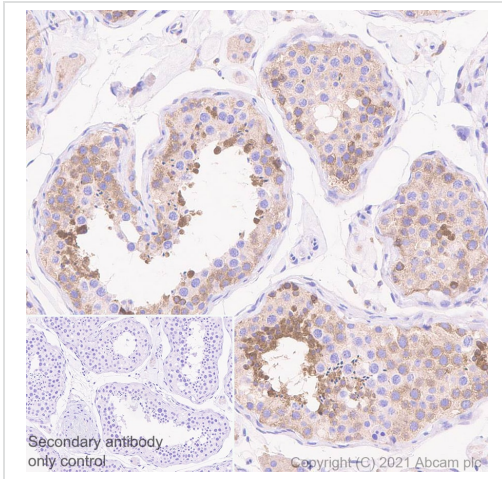
Observed band size: 250 kDa

Blocking and diluting buffer and concentration: 5% NFD/MTBST

Lysates were made freshly and used in WB test immediately to minimize protein degradation.

Exposure time: Lane 1, 3, 4: 3 minutes

Lane 2: 26 seconds

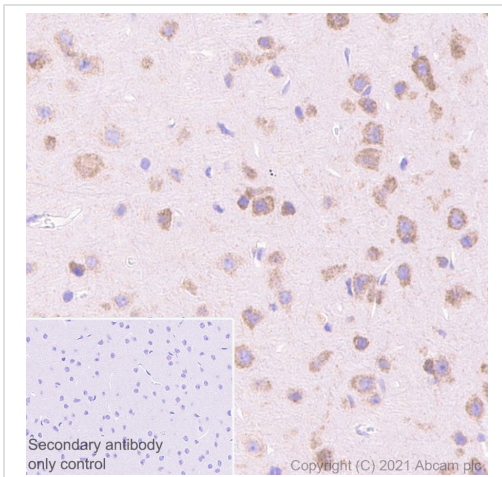


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dicer antibody [EPR24104-105] (ab259327)

Immunohistochemical analysis of paraffin-embedded Human testis tissue labelling Dicer with ab259327 at 1/100 dilution (5.05 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on human testis (PMID:17573847). The section was incubated with ab259327 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

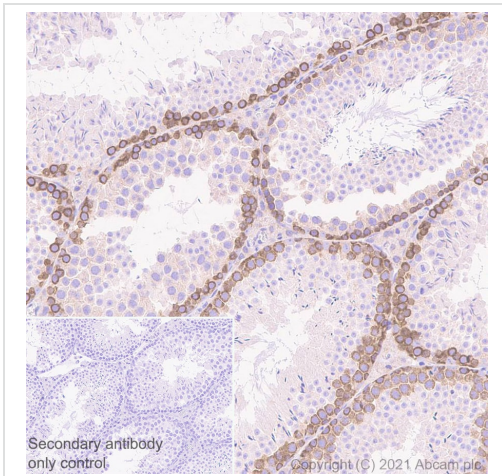


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dicer antibody [EPR24104-105] (ab259327)

Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labelling Dicer with ab259327 at 1/100 dilution (5.05 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on mouse cerebrum (PMID:32737764). The section was incubated with ab259327 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

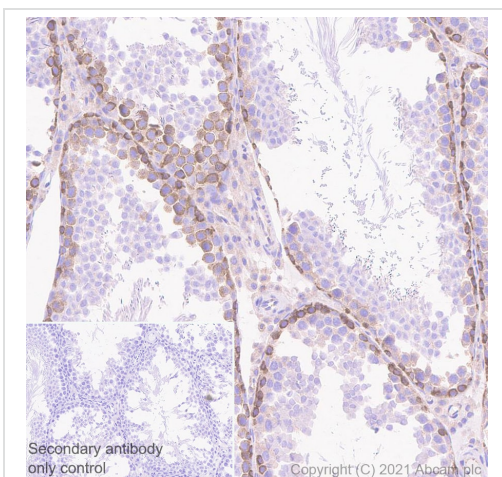


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dicer antibody [EPR24104-105] (ab259327)

Immunohistochemical analysis of paraffin-embedded Mouse testis tissue labelling Dicer with ab259327 at 1/100 dilution (5.05 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on mouse testis. The section was incubated with ab259327 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dicer antibody [EPR24104-105] (ab259327)

Immunohistochemical analysis of paraffin-embedded Rat testis tissue labelling Dicer with ab259327 at 1/100 dilution (5.05 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). Positive staining on rat testis. The section was incubated with ab259327 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Dicer antibody [EPR24104-105] (ab259327)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors