**BACKGROUND**

The mammalian Dicer is a type III RNase-related protein with orthologs in yeast, *Drosophila* and *Arabidopsis*. Dicer contains an RNA-helicase motif, including a DEXH box in its amino-terminus and an RNase motif in the carboxy-terminus. The gene encoding human Dicer maps to chromosome 14q32.13. Dicer is expressed in brain, heart, liver, lung, pancreas, kidney and placenta, and functions in the RNA interference pathway. Dicer cleaves short hairpin RNA precursors of approximately 70 bp into 21-23 bp dsRNAs that selectively target the destruction of homologous RNAs. Dicer localizes to the cytoplasm of mammalian cells. Specifically, it co-localizes with calreticulin in the endoplasmic reticulum. Although the cleavage of RNA by Dicer is ATP-independent, the product release necessary for the rapid turnover of this enzyme may be attributed to ATP. Immunoprecipitation studies indicate Dicer forms a complex with the PIWI domain of elf2C translation initiation factors.

**CHROMOSOMAL LOCATION**

Genetic locus: DICER1 (human) mapping to 14q32.13; Dicer1 (mouse) mapping to 12 E.

**SOURCE**

Dicer (A-2) is a mouse monoclonal antibody raised against amino acids 1701-1912 mapping at the C-terminus of Dicer of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Dicer (A-2) is available conjugated to agarose (sc-136981 AC), 500 µg/ml agarose (sc-136981 AF546), Alexa Fluor® 594 (sc-136981 AF594) or Alexa Fluor® 647 (sc-136981 AF680) or Alexa Fluor® 790 (sc-136981 AF790), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136981 PE), fluorescein (sc-136981 FITC), Alexa Fluor® 488 (sc-136981 AF488), Alexa Fluor® 546 (sc-136981 AF546), Alexa Fluor® 594 (sc-136981 AF594) or Alexa Fluor® 647 (sc-136981 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136981 AF680) or Alexa Fluor® 790 (sc-136981 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

Dicer (A-2) is recommended for detection of Dicer of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:300-3:1000).


Molecular Weight of Dicer: 218 kDa.

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

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