



Dicer (13D6): sc-56651

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. The 218 kDa 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 PIWI domain of eIF2C translation initiation factors.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: DICER1 (human) mapping to 14q32.13; Dicer1 (mouse) mapping to 12 E-F1.

SOURCE

Dicer (13D6) is a mouse monoclonal antibody raised against the N-terminus of Dicer of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dicer (13D6) is recommended for detection of Dicer of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Dicer siRNA (h): sc-40489 and Dicer siRNA (m): sc-40490.

Molecular Weight of Dicer: 218 kDa.

Positive Controls: rat brain extract: sc-2392 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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