SANTA CRUZ BIOTECHNOLOGY, INC.

RNase III Drosha (E-19): sc-31159

BACKGROUND

The ribonuclease III superfamily represents a structurally distinct group of double-strand-specific endonucleases with essential roles in RNA maturation, RNA decay and gene silencing. Initial cleavage of microRNAs is catalyzed by Drosha, a nuclease of the RNase III family, which acts on primary miRNA transcripts (pri-miRNAs) in the nucleus. Human Drosha is a component of two multi-protein complexes. The larger complex contains multiple classes of RNA-associated proteins including RNA helicases, proteins that bind double-stranded RNA, novel heterogeneous nuclear ribonucleoproteins and the Ewing's sarcoma family of proteins. The smaller complex is composed of Drosha and the double-stranded-RNA-binding protein, DGCR8.

REFERENCES

1. Denli A.M., et al. 2004. Processing of primary microRNAs by the micro-processor complex. Nature 432: 231-235.
2. Gregory R.I., et al. 2004. The microprocessor complex mediates the genesis of microRNAs. Nature 432: 235-240.

CHROMOSOMAL LOCATION

Genetic locus: RNASEN (human) mapping to 5p13.3; Rnasen (mouse) mapping to 15 A1.

SOURCE

RNase III Drosha (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RNase III of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31158 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RNase III Drosha (E-19) is recommended for detection of RNase III Drosha of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

RNase III Drosha (E-19) is also recommended for detection of RNase III Drosha in additional species, including equine, canine and bovine.

Suitable for use as control antibody for RNase III Drosha siRNA (h): sc-44080, RNase III Drosha siRNA (m): sc-44812, RNase III Drosha shRNA Plasmid (h): sc-44080-SH, RNase III Drosha shRNA Plasmid (m): sc-44812-SH, and RNase III Drosha shRNA (h) Lentiviral Particles: sc-44080-V and RNase III Drosha shRNA (m) Lentiviral Particles: sc-44812-V.

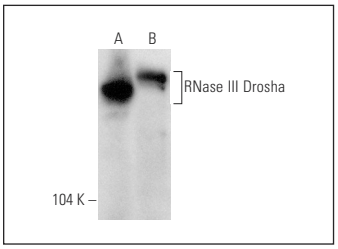
Molecular Weight of RNase III Drosha: 160 kDa.

Positive Controls: mouse brain extract: sc-2253 or human skeletal muscle extract: sc-363776.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RNase III Drosha (E-19): sc-31159. Western blot analysis of RNase III Drosha expression in mouse brain (**A**) and human skeletal muscle (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Liu, Q., et al. 2008. miR-16 family induces cell cycle arrest by regulating multiple cell cycle genes. Nucleic Acids Res. 36: 5391-5404.

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.