SANTA CRUZ BIOTECHNOLOGY, INC.

ERI-1 (S-17): sc-34617

BACKGROUND

Helicase with RNase motif, more commonly designated dicer, cleaves double-stranded RNA (dsRNA) in the RNA interference and small temporal RNA (stRNA) pathways, producing active small RNA components (siRNAs) which target the destruction of RNA and repress gene expression. Human dicer cleaves dsRNA independent of ATP. The 3'-5' exonuclease ERI-1, also known as protein 3'hExo, degrades Histone mRNA after replication and may be involved in the regulation of RNA interference. ERI-1 has a high affinity for the stem-loop structure of replication-dependent Histone pre-mRNAs. It requires the 5'-ACCCA-3' sequence present in stem-loop structure. ERI-1 and a stem-loop binding protein (SLBP) target opposite faces of a unique highly conserved stem-loop RNA scaffold towards the 3' end of Histone mRNA.

REFERENCES

1. Kennedy, S., et al. 2004. A conserved siRNA-degrading RNase negatively regulates RNA interference in *C. elegans*. Nature 427: 645-649.
2. Timmons, L. 2004. Endogenous inhibitors of RNA interference in *Caenorhabditis elegans*. Bioessays 26: 715-718.
3. Sobering, A.K., et al. 2004. Yeast Ras regulates the complex that catalyzes the first step in GPI-anchor biosynthesis at the ER. Cell 117: 637-648.
4. Zhang, J. 2005. Dampening the silencing effect of RNA interference in mammals. Biochem. J. 390: 5-6.
5. Hong, J., et al. 2005. High doses of siRNAs induce ERI-1 and ADAR1 gene expression and reduce the efficiency of RNA interference in the mouse. Biochem. J. 390: 675-679.
6. Wang, D., et al. 2005. Somatic misexpression of germline P granules and enhanced RNA interference in retinoblastoma pathway mutants. Nature 436: 593-597.
7. Wilkins, C., et al. 2005. RNA interference is an antiviral defence mechanism in *Caenorhabditis elegans*. Nature 436: 1044-1047.

CHROMOSOMAL LOCATION

Genetic locus: Eri1 (mouse) mapping to 8 A4.

SOURCE

ERI-1 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ERI-1 of mouse 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-34617 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ERI-1 (S-17) is recommended for detection of ERI-1 of mouse and rat 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).

ERI-1 (S-17) is also recommended for detection of ERI-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ERI-1 siRNA (m): sc-45560, ERI-1 shRNA Plasmid (m): sc-45560-SH and ERI-1 shRNA (m) Lentiviral Particles: sc-45560-V.

Molecular Weight (predicted) of ERI-1: 34 kDa.

Molecular Weight (observed) of ERI-1: 42 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

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.

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.