

ERI-1 (h3): 293T Lysate: sc-159183

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: e5-e6.
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 (human) mapping to 8p23.1.

PRODUCT

ERI-1 (h3): 293T Lysate represents a lysate of human ERI-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

ERI-1 (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive ERI-1 antibodies.

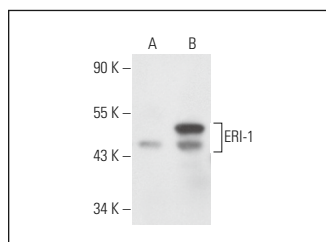
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ERI-1 (B-10): sc-137089 is recommended as a positive control antibody for Western Blot analysis of enhanced human ERI-1 expression in ERI-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

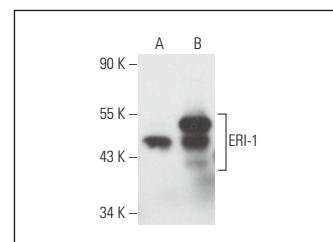
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



ERI-1 (B-10): sc-137089. Western blot analysis of ERI-1 expression in non-transfected: sc-117752 (A) and human ERI-1 transfected: sc-159183 (B) 293T whole cell lysates.



ERI-1 (C-8): sc-137099. Western blot analysis of ERI-1 expression in non-transfected: sc-117752 (A) and human ERI-1 transfected: sc-159183 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.