

ADAT1 (h): 293T Lysate: sc-171272

BACKGROUND

Editing of RNA alters the nucleotide sequence of a transcript to produce codon changes, which can result in alternative translation patterns from a single pre-mRNA. One type of RNA editing involves tRNA-specific adenosine deaminase, ADAT1, which is responsible for the first step in the processing of eukaryotic tRNA^{Ala} transcripts that undergo specific adenosine to inosine modifications. Additionally, members of the double-stranded RNA (dsRNA) adenosine deaminase family of enzymes, ADAR1 and ADAR2, act on double-stranded regions of RNA. dsRNA structures are formed by base pairing of an exonic sequence around the editing site with a complementary sequence in the downstream intron. ADAR family member-mediated editing occurs in the nucleus before splicing removes the respective intron. These enzymes all facilitate the deamination of adenosine to generate inosine, which is then translated as guanosine. ADAR1, ADAR2 and a related brain-specific ADAR family member, RED2, contain a central series of double-stranded RNA-binding motifs and a C-terminal catalytic domain. ADAR1 also contains a novel Zn-DNA binding domain at the N-terminal region, and when bound to Z-DNA-ADAR1 is substantially less susceptible to proteolytic degradation.

REFERENCES

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3. Rueter, S.M., Dawson, T.R. and Emeson, R.B. 1999. Regulation of alternative splicing by RNA editing. *Nature* 399: 75-80.
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CHROMOSOMAL LOCATION

Genetic locus: ADAT1 (human) mapping to 16q23.1.

PRODUCT

ADAT1 (h): 293T Lysate represents a lysate of human ADAT1 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ADAT1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ADAT1 antibodies. Recommended use: 10-20 μ l per lane.

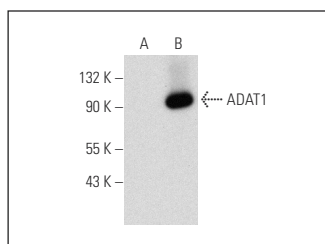
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ADAT1 (C-5): sc-271812 is recommended as a positive control antibody for Western Blot analysis of enhanced human ADAT1 expression in ADAT1 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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



ADAT1 (C-5): sc-271812. Western blot analysis of ADAT1 expression in non-transfected: sc-117752 (A) and human ADAT1 transfected: sc-171272 (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.