SZABO SCANDIC

Part of Europa Biosite

# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


**SZABO-SCANDIC HandelsgmbH**

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

# 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 tRNAAla 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 faciliate 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 Za-DNA binding domain at the N-terminal region, and when bound to Z-DNA-ADAR1 is substantially less susceptible to proteolytic degradation.

## REFERENCES


1. Maas, S., Melcher, T., Herb, A., Seeburg, P.H., Keller, W., Krause, S., Higuchi, M. and O'Connell, M.A. 1996. Structural requirements for RNA editing in glutamate receptor pre-mRNAs by recombinant double-stranded RNA adenosine deaminase. J. Biol. Chem. 271: 12221-12226.
2. Melcher, T., Maas, S., Herb, A., Sprengel, R., Higuchi, M. and Seeburg, P.H. 1996. RED2, a brain-specific member of the RNA-specific adenosine deaminase family. J. Biol. Chem. 271: 31795-31798.
3. Rueter, S.M., Dawson, T.R. and Emeson, R.B. 1999. Regulation of alternative splicing by RNA editing. Nature 399: 75-80.
4. Maas, S., Gerber, A.P. and Rich, A. 1999. Identification and characterization of a human tRNA-specific adenosine deaminase related to the ADAR family of pre-mRNA editing enzymes. Proc. Natl. Acad. Sci. USA 96: 8895-8900.
5. Lehmann, K.A. and Bass, B.L. 1999. The importance of internal loops within RNA substrates of ADAR1. J. Mol. Biol. 291: 1-13.
6. Keller, W., Wolf, J. and Gerber, A. 1999. Editing of messenger RNA precursors and of tRNAs by adenosine to inosine conversion. FEBS Lett. 452: 71-76.
7. Schade, M., Turner, C.J., Kuhne, R., Schmieder, P., Lowenhaupt, K., Herbert, A., Rich, A. and Oschkinat, H. 1999. The solution structure of the Zα domain of the human RNA editing enzyme ADAR1 reveals a prepositioned binding surface for Z-DNA. Proc. Natl. Acad. Sci. USA 96: 12465-12470.


## 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 µg protein in 200 µl 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 µl per lane.

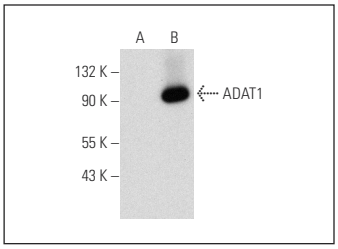
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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-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




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.