

ADAR1 (C-16): sc-10002

BACKGROUND

RNA-specific adenosine deaminase (ADAR1, DSH, IFI4, p136, DRADA, DSRAD, K88dsRBP) mediates RNA editing by destabilizing double stranded RNA through deamination of adenosine to inosine in structured or double-stranded RNAs. ADAR1 is expressed from an interferon-response promoter and has a Z-DNA/Z-RNA binding domain at its N-terminus. ADAR1 co-localizes with SUMO-1 in a subnucleolar region that is distinct from the fibrillar center, the dense fibrillar component and the granular component. Localization of nuclear ADAR1 is under the influence of a nucleolar localization signal (NoLS) in the middle of ADAR1 and the exporting activity of the nuclear exporter signal (NES) near the N terminus. ADAR1 upregulates nuclear factor 90 (NF90)-mediated gene expression by interacting with NF110, NF90 and NF45. ADAR1 binds short interfering RNA (siRNA), and gene silencing by siRNA is significantly more effective in mouse fibroblasts homozygous for an ADAR1 null mutation than in wild-type cells. ADAR1 may limit the efficacy of siRNA in mammalian cells.

CHROMOSOMAL LOCATION

Genetic locus: ADAR (human) mapping to 1q21.3; Adar (mouse) mapping to 3 F1.

SOURCE

ADAR1 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ADAR1 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-10002 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ADAR1 (C-16) is recommended for detection of ADAR1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

ADAR1 (C-16) is also recommended for detection of ADAR1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ADAR1 siRNA (h): sc-37657, ADAR1 siRNA (m): sc-37658, ADAR1 shRNA Plasmid (h): sc-37657-SH, ADAR1 shRNA Plasmid (m): sc-37658-SH, ADAR1 shRNA (h) Lentiviral Particles: sc-37657-V and ADAR1 shRNA (m) Lentiviral Particles: sc-37658-V.

Molecular Weight of full length ADAR1: 150 kDa.

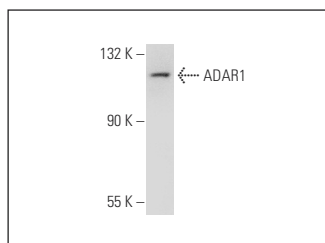
Molecular Weight of ADAR1 cleavage products: 120/110 kDa.

Positive Controls: Ramos nuclear extract: sc-2153.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



ADAR1 (C-16): sc-10002. Western blot analysis of ADAR1 expression in Ramos nuclear extract.

SELECT PRODUCT CITATIONS

- Nie, Y., et al. 2005. ADAR1 interacts with NF90 through double-stranded RNA and regulates NF90-mediated gene expression independently of RNA editing. *Mol. Cell. Biol.* 25: 6956-6963.

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.



Try **ADAR1 (D-8): sc-271854** or **ADAR1 (15.8.6): sc-73408**, our highly recommended monoclonal alternatives to ADAR1 (C-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ADAR1 (D-8): sc-271854**.