SANTA CRUZ BIOTECHNOLOGY, INC.

ADAR2 (H-90): sc-33180

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The Power to Question

BACKGROUND

ADAR2, also designated adenosine deaminase, RNA-specific (RED1), RNA-editing enzyme 1, DRABA2, DRADA2, ADAR2α-L1, ADAR2α-L2 and ADAR2α-L3, mediates RNA editing by destabilizing RNA through deamination of adenosine to inosine. ADAR2 is responsible for pre-mRNA editing of the glutamate receptor subunit B by site-specific deamination of adenosines. It can modify its own pre-mRNA and generate new splice sites. Translocation of endogenous ADAR2 from the nucleolus to the nucleoplasm results in increased editing of endogenous ADAR2 substrates. Alternative splicing of this gene results in several transcript variants that may influence RNA editing. RNA editing involves the deamination of adenosines at specific sites, the result of which can be a change in the amino acid sequence of the protein so that it differs from that predicted by the sequence of the DNA.

REFERENCES

1. Higuchi, M., et al. 2000. Point mutation in an AMPA receptor gene rescues lethality in mice deficient in the RNA-editing enzyme ADAR2. Nature 406: 78-81.
2. Wong, S.K., et al. 2001. Substrate recognition by ADAR1 and ADAR2. RNA 7: 846-858.

CHROMOSOMAL LOCATION

Genetic locus: ADARB1 (human) mapping to 21q22.3; Adarb1 (mouse) mapping to 10 C1.

SOURCE

ADAR2 (H-90) is a rabbit polyclonal antibody raised against amino acids 281-370 mapping within an internal region of ADAR2 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.

APPLICATIONS

ADAR2 (H-90) is recommended for detection of all ADAR2 isoforms 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).

ADAR2 (H-90) is also recommended for detection of all ADAR2 isoforms in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for ADAR2 siRNA (h): sc-37659, ADAR2 siRNA (m): sc-37660, ADAR2 shRNA Plasmid (h): sc-37659-SH, ADAR2 shRNA Plasmid (m): sc-37660-SH, ADAR2 shRNA (h) Lentiviral Particles: sc-37659-V and ADAR2 shRNA (m) Lentiviral Particles: sc-37660-V.

Molecular Weight of ADAR2 monomer: 90 kDa.

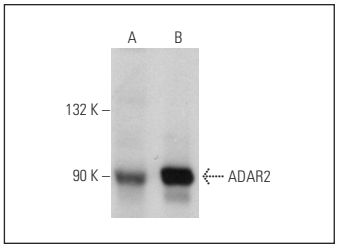
Molecular Weight of ADAR2 homodimer: 180 kDa.

Positive Controls: ADAR2 (h): 293T Lysate: sc-117039.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ADAR2 (H-90): sc-33180. Western blot analysis of ADAR2 expression in non-transfected: sc-117752 (**A**) and human ADAR2 transfected: sc-117039 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Paz, N., et al. 2007. Altered adenosine-to-inosine RNA editing in human cancer. Genome Res. 17: 1586-1595.

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.