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Product Information

Anti- ADAR1 (C-terminal)
produced in rabbit, IgG fraction of antiserum

Catalog Number **SAB4200542**

Product Description

Anti-ADAR1 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminal region of human ADAR1 (GeneID: 103), conjugated to KLH. The corresponding sequence is identical in rat, bovine, pig, dog and monkey and differs by one amino acid in mouse. Whole antiserum is purified using protein A immobilized on agarose to provide the IgG fraction of antiserum.

Anti-ADAR1 (C-terminal) recognizes human ADAR1. The antibody may be used in various immunochemical techniques including immunoblotting (~110 kDa) and immunoprecipitation. Detection of the ADAR1 band by immunoblotting is specifically inhibited by the immunizing peptide.

RNA editing by hydrolytic deamination of adenosine (A) to inosine (I) in double-stranded (ds)RNA is the most common type of editing in higher eukaryotes. This RNA editing event is catalyzed by the ADAR (adenosine deaminase that acts in RNA) enzyme.[1] Two ADAR enzymes that have been shown to posses enzymatic activity in mammals, ADAR1 and ADAR2. Both can convert specific adenosine to inosine in pre-mRNA and can also convert up to 40-50% of the adenosines in long synthetic duplex RNAs.[2] ADAR1 and ADAR2 are expressed in most tissues but in general, the pre-mRNA being edited represents receptors of the central nervous systems.[3] ADAR1 has several isoforms which include the full length ADAR1 (150 kDa) and two functionally active short isoforms (80 and 110 kDa).[4] It plays critical roles in differentiating cells of embryo and adult tissues, supporting cell survival and permitting their further differentiation and maturation.[5] Its role in embryonic development is especially demonstrated within the hematopoietic lineage as well as in adult hematopoietic progenitor cells (HPCs).[6] ADAR1 is also an essential regulator of hematopoietic stem cell maintenance and suppressor of interferon signaling that may protect organisms from the deleterious effects of interferon activation associated with many pathological processes, including chronic inflammation, autoimmune disorders and cancer.[7]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1:500-1:1000 is recommended using whole extracts of human HEK-293T or G361 cells.

Immunoprecipitation: a working amount of 5-10 µL is recommended using lysates of human HepG2 or HeLa cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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