

# ADK (C-20): sc-23361

## BACKGROUND

Adenosine kinase (ATP:adenosine 5'-phosphotransferase), or ADK, is an abundant enzyme in mammalian tissues that catalyzes the transfer of the  $\gamma$ -phosphate from ATP to adenosine, thereby serving as a regulator of concentrations of both extracellular adenosine and intracellular adenine nucleotides. Adenosine, an extracellular signaling molecule, has widespread effects on the cardiovascular, nervous, respiratory, and immune systems with increased concentration at sites of tissue injury and inflammation. Adenosine is an efficient inhibitor of neuronal activity with the ability to suppress seizure activity in various animal models of epilepsy. The human ADK gene maps to chromosome 10q22.2 and encodes 2 ADK transcripts that encode a 345-amino acid form and a 362-amino acid form of the enzyme. These 2 alternately spliced forms differ only at the 5' end, where the first 4 encoded residues of the short form are replaced by 21 residues in the long form. When expressed, both isoforms of the enzyme phosphorylate adenosine with identical kinetics and both require  $Mg^{2+}$  for activity. ADK is fully active under dilute conditions, but tends to form soluble aggregates at higher concentrations, which results in inactivation of the enzyme.

## CHROMOSOMAL LOCATION

Genetic locus: ADK (human) mapping to 10q22.2; Adk (mouse) mapping to 14 A3.

## SOURCE

ADK (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ADK of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23361 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ADK (C-20) is recommended for detection of ADK of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ADK (C-20) is also recommended for detection of ADK in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ADK siRNA (h): sc-38902, ADK siRNA (m): sc-38903, ADK shRNA Plasmid (h): sc-38902-SH, ADK shRNA Plasmid (m): sc-38903-SH, ADK shRNA (h) Lentiviral Particles: sc-38902-V and ADK shRNA (m) Lentiviral Particles: sc-38903-V.

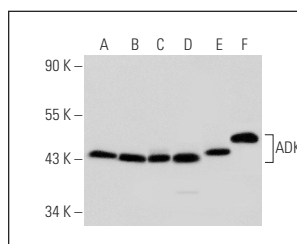
Molecular Weight of ADK: 48/38 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

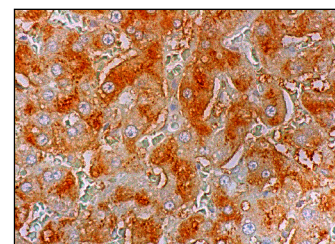
## RECOMMENDED SECONDARY REAGENTS

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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



ADK (C-20): sc-23361. Western blot analysis of ADK expression in Hep G2 (A), HeLa (B), HEK293 (C), A-431 (D), RT-4 (E) and K-562 (F) whole cell lysates.



ADK (C-20): sc-23361. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Satisfaction  
Guaranteed

Try **ADK (H-1): sc-514588** or **ADK (F-5): sc-365470**, our highly recommended monoclonal alternatives to ADK (C-20).