SANTA CRUZ BIOTECHNOLOGY, INC.

adenosine deaminase (H-300): sc-25747



BACKGROUND

Adenosine deaminase is an enzyme that is present in most tissues. It exists predominantly as a monomer, although in some tissues it is associated with adenosine deaminase-binding protein. Adenosine deaminase degrades extracellular adenosine, which is toxic for lymphocytes. Adenosine deaminase also effects co-stimulatory signals in T cells via interactions with CD26. Deficiency of adenosine deaminase has been shown to lead to immunodeficiency diseases such as SCID (severe combined immunodeficiency disease) and has been associated with hereditary hemolytic anemia, a disease in which adenosine deaminase levels are elevated fifty to seventy fold.

CHROMOSOMAL LOCATION

Genetic locus: ADA (human) mapping to 20q13.12; Ada (mouse) mapping to 2 H3.

SOURCE

adenosine deaminase (H-300) is a rabbit polyclonal antibody raised against amino acids 64-363 of adenosine deaminase of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

adenosine deaminase (H-300) is recommended for detection of adenosine deaminase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

adenosine deaminase (H-300) is also recommended for detection of adenosine deaminase in additional species, including equine, canine and bovine.

Suitable for use as control antibody for adenosine deaminase siRNA (h): sc-29644, adenosine deaminase siRNA (m): sc-29645, adenosine deaminase shRNA Plasmid (h): sc-29644-SH, adenosine deaminase shRNA Plasmid (m): sc-29645-SH, adenosine deaminase shRNA (h) Lentiviral Particles: sc-29644-V and adenosine deaminase shRNA (m) Lentiviral Particles: sc-29645-V.

Molecular Weight of adenosine deaminase: 41 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MM-142 cell lysate: sc-2246 or MOLT-4 cell lysate: sc-2233.

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. 4) Immuno-histochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA





adenosine deaminase (H-300): sc-25747. Western blot analysis of adenosine deaminase expression in Jurkat (A) and MOLT-4 (B) whole cell lysates. adenosine deaminase (H-300): sc-25747. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic, membrane and nuclear staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Mortellaro, A., et al. 2006. *Ex vivo* gene therapy with lentiviral vectors rescues adenosine deaminase (ADA)-deficient mice and corrects their immune and metabolic defects. Blood 108: 2979-2988.
- Carbonaro, D.A., et al. 2006. *In vivo* transduction by intravenous injection of a lentiviral vector expressing human ADA into neonatal ADA gene knockout mice: a novel form of enzyme replacement therapy for ADA deficiency. Mol. Ther. 13: 1110-1120.
- 3. Muncan, V., et al. 2011. Blimp1 regulates the transition of neonatal to adult intestinal epithelium. Nat. Commun. 2: 452.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS Satisfation Guaranteed Try adenosine deaminase (D-4): sc-28346 or adenosine deaminase (D-10): sc-376889, our highly recommended monoclonal aternatives to adenosine deaminase (H-300).