

adenosine deaminase (D-4): sc-28346

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.

SOURCE

adenosine deaminase (D-4) is a mouse monoclonal antibody raised against amino acids 64-363 of adenosine deaminase of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

adenosine deaminase (D-4) is available conjugated to agarose (sc-28346 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28346 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28346 PE), fluorescein (sc-28346 FITC), Alexa Fluor® 488 (sc-28346 AF488), Alexa Fluor® 546 (sc-28346 AF546), Alexa Fluor® 594 (sc-28346 AF594) or Alexa Fluor® 647 (sc-28346 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28346 AF680) or Alexa Fluor® 790 (sc-28346 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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 (D-4) is recommended for detection of adenosine deaminase of human origin by Western Blotting (starting dilution 1:100, dilution range), 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), 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).

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

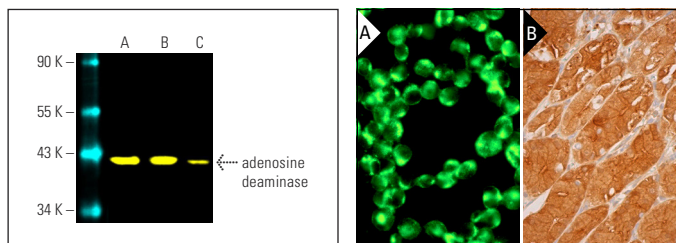
Molecular Weight of adenosine deaminase: 41 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MOLT-4 cell lysate: sc-2233 or CCRF-CEM cell lysate: sc-2225.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



adenosine deaminase (D-4) Alexa Fluor® 488: sc-28346 AF488. Direct fluorescent western blot analysis of adenosine deaminase expression in Jurkat (A), MOLT-4 (B) and CCRF-CEM (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 647: sc-516791.

adenosine deaminase (D-4): sc-28346. Immunofluorescence staining of methanol-fixed Jurkat cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Cader, M.Z., et al. 2020. FAMIN is a multifunctional purine enzyme enabling the purine nucleotide cycle. Cell 180: 278-295.e23.
2. Lee, S.C., et al. 2022. Cordycepin (3'-deoxyadenosine) suppresses heat shock protein 90 function and targets tumor growth in an adenosine deaminase-dependent manner. Cancers 14: 3122.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.