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Adenosine deaminase Rabbit pAb

Catalog # AP97335

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P00813
Other Accession	P00813
Reactivity	Rat, Human, Mouse
Predicted	Pig, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40764
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Adenosine deaminase
Epitope Specificity	65-170/363
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the adenosine and AMP deaminases family.
SUBUNIT	Interacts with DPP4 (extracellular domain).
Post-translational modifications	The Ser/Thr-rich domain is heavily O-glycosylated.
DISEASE	Defects in ADA are the cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-negative/NK-cell-negative due to adenosine deaminase deficiency (ADASCID) [MIM:102700]. SCID refers to a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. Patients with SCID present in infancy with recurrent, persistent infections by opportunistic organisms. The common characteristic of all types of SCID is absence of T-cell-mediated cellular immunity due to a defect in T-cell development. ADA-SCID is an autosomal recessive form accounting for about 50% of non-X-linked SCIDs. ADA deficiency has been diagnosed in chronically ill teenagers and adults (late or adult onset). Population and newborn screening programs have also identified several healthy individuals with normal immunity who have partial ADA deficiency.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Catalyzes the hydrolytic deamination of adenosine and 2-deoxyadenosine. Plays an important role in purine metabolism and in adenosine homeostasis. Modulates signaling by extracellular adenosine, and so contributes indirectly to cellular signaling events. Acts as a positive regulator of T-cell coactivation, by binding DPP4. Its interaction with DPP4 regulates lymphocyte-epithelial cell adhesion.

Additional Information

Gene ID	100
Other Names	ADA1; ADA_HUMAN; ADA; Adenosine aminohydrolase; 3.5.4.4; adenosine deaminase
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ADA
Synonyms	ADA1
Function	Catalyzes the hydrolytic deamination of adenosine and 2- deoxyadenosine (PubMed:16670267, PubMed:23193172, PubMed:26166670, PubMed:8452534, PubMed:9361033). Plays an important role in purine metabolism and in adenosine homeostasis. Modulates signaling by extracellular adenosine, and so contributes indirectly to cellular signaling events. Acts as a positive regulator of T-cell coactivation, by binding DPP4 (PubMed:20959412). Its interaction with DPP4 regulates lymphocyte-epithelial cell adhesion (PubMed:11772392). Enhances dendritic cell immunogenicity by affecting dendritic cell costimulatory molecule expression and cytokines and chemokines secretion (By similarity). Enhances CD4+ T-cell differentiation and proliferation (PubMed:20959412). Acts as a positive modulator of adenosine receptors ADORA1 and ADORA2A, by enhancing their ligand affinity via conformational change (PubMed:23193172). Stimulates plasminogen activation (PubMed:15016824). Plays a role in male fertility (PubMed:21919946, PubMed:26166670). Plays a protective role in early postimplantation embryonic development (By similarity). Also responsible for the deamination of cordycepin (3'-deoxyadenosine), a fungal natural product that shows antitumor, antibacterial, antifungal, antivirus, and immune regulation properties (PubMed:26038697).
Cellular Location	Cell membrane; Peripheral membrane protein; Extracellular side. Cell junction. Cytoplasmic vesicle lumen {ECO:0000250|UniProtKB:P03958}. Cytoplasm. Lysosome. Note=Colocalized with DPP4 at the cell surface.
Tissue Location	Found in all tissues, occurs in large amounts in T- lymphocytes (PubMed:20959412). Expressed at the time of weaning in gastrointestinal tissues.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.