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Anti-ADA Picoband Antibody

Catalog # ABO12892

Product Information

Application	WB, IHC-P, E
Primary Accession	P03958
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for ADA detection. Tested with WB, IHC-P, Direct ELISA in Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	11486
Other Names	Adenosine deaminase, 3.5.4.4, Adenosine aminohydrolase, Ada
Calculated MW	39992
Application Details	Western blot, 0.1-0.5 □g/ml Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml Direct ELISA, 0.1-0.5 □g/ml
Subcellular Localization	Cell membrane; Peripheral membrane protein; Extracellular side. Cell junction.
Tissue Specificity	Detected in brain neurons in the median emninence (at protein level) (PubMed:8783262). Expressed in secondary deciduum (at protein level) (PubMed:9272950). Found in all tissues, occurs in large amounts in T-lymphocytes and, at the time of weaning, in gastrointestinal tissues.
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
Immunogen	E. coli-derived mouse ADA recombinant protein (Position: A2-H238).
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C; for one year. After r˚Constitution, at 4˚C; for one month. It˚Can also be aliquotted and stored frozen at -20˚C; for a longer time. Avoid

repeated freezing and thawing.

Protein Information

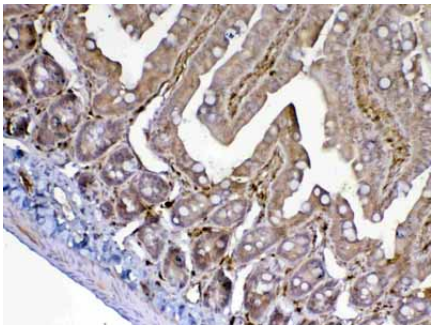
Name	Ada
Function	Catalyzes the hydrolytic deamination of adenosine and 2- deoxyadenosine (PubMed:10720488, PubMed:8634299, PubMed:8672487, PubMed:8942668, PubMed:9272950). Plays an important role in purine metabolism and in adenosine homeostasis (PubMed:10720488, PubMed:9272950). Modulates signaling by extracellular adenosine, and so contributes indirectly to cellular signaling events (PubMed:11435465). Acts as a positive regulator of T-cell coactivation, by binding DPP4. Its interaction with DPP4 regulates lymphocyte-epithelial cell adhesion (By similarity). 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 (By similarity). Acts as a positive modulator of adenosine receptors ADORA1 and ADORA2A, by enhancing their ligand affinity via conformational change (By similarity). Stimulates plasminogen activation (By similarity). Plays a role in male fertility (By similarity). Plays a protective role in early postimplantation embryonic development (PubMed:9272950). 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 {ECO:0000250|UniProtKB:P00813}; Peripheral membrane protein; Extracellular side. Cell junction {ECO:0000250|UniProtKB:P00813} Cytoplasmic vesicle lumen. Cytoplasm. Lysosome {ECO:0000250|UniProtKB:P00813} Note=Colocalized with DPP4 at the cell surface {ECO:0000250|UniProtKB:P00813}
Tissue Location	Detected in brain neurons in the median emninence (at protein level) (PubMed:8783262). Expressed in secondary deciduum (at protein level) (PubMed:9272950). Found in all tissues, occurs in large amounts in T-lymphocytes and, at the time of weaning, in gastrointestinal tissues.

Background

Adenosine Deaminase (also known as adenosine aminohydrolase, or ADA) is an enzyme involved in purine metabolism. Primarily, ADA in humans is involved in the development and maintenance of the immune system. However, ADA association has also been observed with epithelial cell differentiation, neurotransmission, and gestation maintenance. It has also been proposed that ADA, in addition to adenosine breakdown, stimulates release of excitatory amino acids and is necessary to the coupling of A1 adenosine receptors and heterotrimeric G proteins. Adenosine deaminase deficiency leads to pulmonary fibrosis, suggesting that chronic exposure to high levels of adenosine can exacerbate inflammation responses rather than suppressing them. It has also been recognized that adenosine deaminase protein and activity is upregulated in mouse hearts that overexpress HIF-1 alpha, which in part explains the attenuated levels of adenosine in HIF-1 alpha expressing hearts during ischemic stress.

Images

Figure 2. IHC analysis of ADA using anti-ADA antibody (ABO12892).ADA was detected in paraffin-embedded section of rat small intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6,



epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-ADA Antibody (ABO12892) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

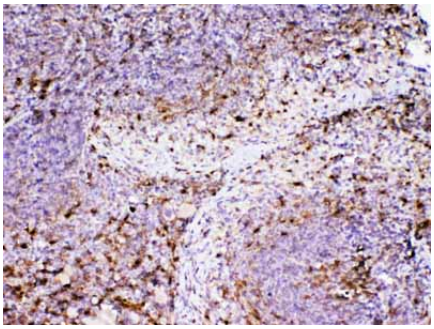


Figure 3. IHC analysis of ADA using anti-ADA antibody (ABO12892).ADA was detected in paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-ADA Antibody (ABO12892) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

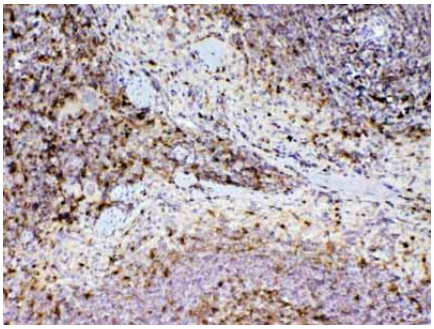


Figure 4. IHC analysis of ADA using anti-ADA antibody (ABO12892).ADA was detected in paraffin-embedded section of mouse spleen tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-ADA Antibody (ABO12892) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

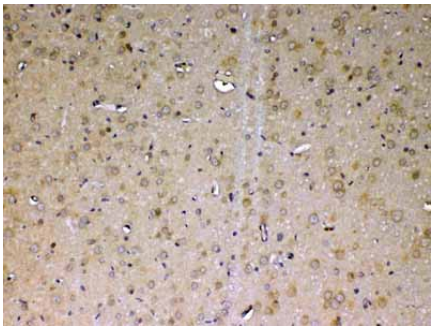


Figure 5. IHC analysis of ADA using anti-ADA antibody (ABO12892).ADA was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-ADA Antibody (ABO12892) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

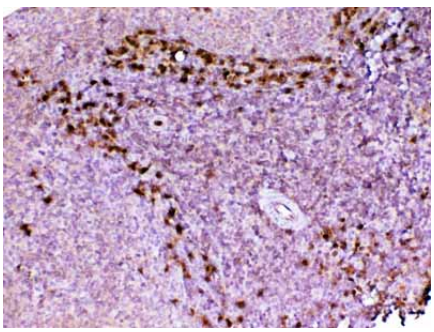


Figure 6. IHC analysis of ADA using anti-ADA antibody (ABO12892).ADA was detected in paraffin-embedded section of rat spleen tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-ADA Antibody (ABO12892) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was

developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.