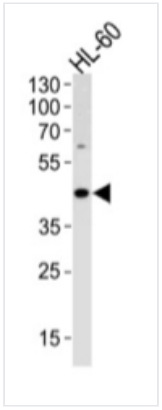
# ADA Antibody – Rabbit Polyclonal

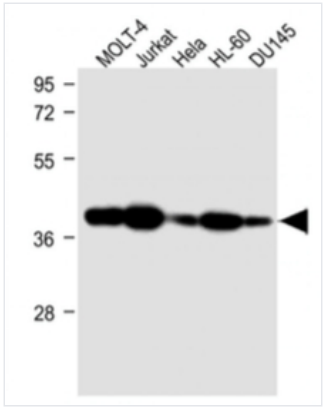
## PRODUCT OVERVIEW

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| **Product Name** | ADA, Polyclonal Antibody |
| **Full Product Name** | ADA, CT (ADA, ADA1, Adenosine deaminase, Adenosine aminohydrolase) (MaxLight 650) |
| **Product Gene Name** | anti-ADA antibody |
| **Product Synonym Names** | ADA; ADA1; Adenosine deaminase; Adenosine aminohydrolase |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight650. |
| **Purity/Purification** | Purified by Protein A and Peptide Affinity Chromatography. |
| **Specificity** | Recognizes human ADA. |
| **Preparation and Storage** | Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight650 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap. |
| **Molecular Weight** | 40,764 Da |
| **Chromosome Location** | Chromosome: 20; NC_000020.10 (43248163..43280376, complement). Location: 20q13.12 |
| **OMIM** | 102700 |
| **3D Structure** | ModBase 3D Structure for P00813 |
| **Immunogen** | KLH-conjugated synthetic peptide mapping to a fragment of residues within amino acids 287-314 in the C-terminal region of human ADA. |
| **Conjugate** | MaxLight650 |
| **Note** | Preservative Free |
| **Product Categories/Family for anti-ADA antibody** | Antibodies; Enzymes |
| **Applications Tested/Suitable for anti-ADA antibody** | Western Blot (WB), Flow Cytometry (FC/FACS), FLISA |
| **Application Notes for anti-ADA antibody** | Applications are based on unconjugated antibody. |
| **Related Product Information for anti-ADA antibody** | This gene encodes an enzyme that catalyzes the hydrolysis of adenosine to inosine. Various mutations have been described for this gene and have been linked to human diseases. Deficiency in this enzyme causes a form of severe combined immunodeficiency disease (SCID), in which there is dysfunction of both B and T lymphocytes with impaired cellular immunity and decreased production of immunoglobulins, whereas elevated levels of this enzyme have been associated with congenital hemolytic anemia. |
| **Product References and Citations for anti-ADA antibody** | 1. Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010). 2. Gloria-Bottini, F., et al. Am. J. Med. Sci. 340(2):103-108(2010). 3. Levine, A.J., et al. Cancer Epidemiol. Biomarkers Prev. 19(7):1812-1821(2010). 4. Spina, C., et al. Cancer Invest. (2010). 5. Ri, G., et al. Anticancer Res. 30(6):2347-2349(2010). |

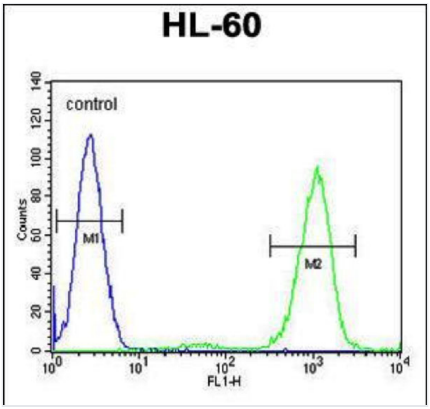
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| **Other Notes** | Small volumes of anti-ADA antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for ADA purchase** | MBS6271472 is an antibody targeting ADA. Also known as ADA, CT (ADA, ADA1, Adenosine deaminase, Adenosine aminohydrolase) (MaxLight 650). Reactive in Human. Host: Rabbit. |




**Western Blot (WB) of anti-ADA antibody**
Western Blot analysis in HL-60 cell line lysates (35ug/lane) usingMBS6008389. This demonstrates that MBS6008389 detected the ADA protein (arrow).




**Western Blot (WB) of anti-ADA antibody**
Western Blot using MBS6008389 (1:1000); Lane 1: MOLT-4 whole cell lysate 20ug/lane Lane 2: Jurkat whole cell lysate 20ug/lane Lane 3: Hela whole cell lysate 20ug/lane Lane 4: HL-60 whole cell lysate 20ug/lane Lane 5: DU145 whole cell lysate. 20ug/lane Secondary IgG (HRP) Goat Anti-Rabbit Predicted band size: 41kD. Blocking/Dilution buffer: 5% NFDM/TBST.




**Flow Cytometry (FC/FACS) of anti-ADA antibody**
Flow Cytometric analysis of HL-60 cells using MBS6008389 (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ADA. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 47078295 |
| **NCBI GeneID** | 100 |
| **NCBI Accession #** | NP_000013.2 |
| **UniProt Primary Accession #** | P00813 |
| **UniProt Secondary Accession #** | Q53F92; Q6LA59 |
| **UniProt Related Accession #** | P00813 |
| **GenBank Nucleotide #** | NM_000022.2 |
| **NCBI Official Full Name** | adenosine deaminase |

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| **NCBI Official Synonym Full Names** | adenosine deaminase |
| **NCBI Official Symbol** | ADA |
| **UniProt Protein Name** | Adenosine deaminase |
| **UniProt Synonym Protein Names** | Adenosine aminohydrolase |
| **Protein Family** | Bifunctional transcriptional activator/DNA repair enzyme |
| **UniProt Gene Name** | ADA |
| **UniProt Synonym Gene Names** | ADA1 |
| **UniProt Entry Name** | ADA_HUMAN |
| **NCBI Protein Information** | adenosine deaminase; adenosine aminohydrolase |
| **UniProt Comments for ADA** | ADA: a enzyme that converts adenosine + H2O into inosine + NH3. Found in all tissues, occurs in large amounts in T-lymphocytes and, at the time of weaning, in gastrointestinal tissues. Genetic ADA deficiencies are a cause of autosomal recessive severe combined immuno-deficiency (SCID). Hereditary hemolytic anemia is caused by expression levels in erythrocytes 50-70 times greater than the norm.<br><br>Protein type: Nucleotide Metabolism - purine; EC 3.5.4.4; Hydrolase<br><br>Chromosomal Location of Human Ortholog: 20q13.12<br><br>Cellular Component: dendrite cytoplasm; extracellular space; cell surface; membrane; cell soma; lysosome; cytoplasm; plasma membrane; cytosol; cell junction; external side of plasma membrane<br><br>Molecular Function: adenosine deaminase activity; protein binding; zinc ion binding; purine nucleoside binding<br><br>Biological Process: negative regulation of circadian sleep/wake cycle, non-REM sleep; T cell activation; adenosine catabolic process; deoxyadenosine catabolic process; response to morphine; positive regulation of calcium-mediated signaling; purine salvage; histamine secretion; positive regulation of T cell differentiation in the thymus; purine ribonucleoside monophosphate biosynthetic process; response to vitamin E; regulation of cell-cell adhesion mediated by integrin; positive regulation of T cell receptor signaling pathway; negative regulation of mature B cell apoptosis; positive regulation of B cell proliferation; positive regulation of germinal center formation; hypoxanthine salvage; positive regulation of smooth muscle contraction; negative regulation of adenosine receptor signaling pathway; embryonic gut development; aging; placenta development; Peyer's patch development; response to drug; dATP catabolic process; nucleobase, nucleoside and nucleotide metabolic process; positive regulation of heart rate; liver development; negative regulation of leukocyte migration; purine base metabolic process; trophectodermal cell differentiation; purine nucleotide salvage; xanthine biosynthetic process; response to hydrogen peroxide; negative regulation of inflammatory response; response to hypoxia; inosine biosynthetic process; germinal center B cell differentiation; alveolus development; positive regulation of alpha-beta T cell differentiation<br><br>Disease: Severe Combined Immunodeficiency, Autosomal Recessive, T Cell-negative, B Cell-negative, Nk Cell-negative, Due To Adenosine Deaminase Deficiency |
| **Research Articles on ADA** | **1.** Taken together, these findings suggest that ADA would promote enhanced and correctly polarized T-cell responses in strategies targeting asymptomatic HIV-infected individuals. |
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