Data Sheet (Cat.No.TMPY-03985)

TargetMol

Adenosine Deaminase Protein, Human, Recombinant (His)

General Information

Synonyms:	ADA1;adenosine deaminase;ADA
Protein Construction:	A DNA sequence encoding the human ADA (P00813) (Met1-Leu363) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P00813
Molecular Weight:	42.1 kDa (predicted); 44 kDa (reducing conditions)

QC Testing

Biological Activity:	Measured by the ability to catalyze the hydrolytic deamination of adenosine to inosine. The specific activity is>40,000 pmol/min/μg.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, 10% glycerol, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Adenosine Desaminase (ADA) deficiency, is a purine metabolic disorder that cause severe combined immunodeficiency (SCID) due to the accumulation of toxic metabolites that primarily affects development, differentiation and function of T and B lymphocytes. Adenosine deaminase is a polymorphic enzyme that has an important role in immune functions and in the regulation of intracellular and extracellular concentrations of adenosine and adenosine receptor activity. ADA activity might be considered as a useful diagnostic tool among

the other markers in these diseases. Genetic variability of ADA activity may have, therefore, an important role in resistance to malaria. Adenosine Deaminase (ADA) deficiency is an autosomal recessive variant of severe combined immunodeficiency (SCID) caused by systemic accumulation of ADA substrates.

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