



Laboratory Service Manual

Lab Dept: Chemistry

Test Name: ADENOSINE DEAMINASE

General Information

Lab Order Codes: ADEA

Synonyms: ADA

CPT Codes: 82657 – Enzyme activity in blood cells, cultured cells, or tissue, not elsewhere specified; nonradioactive substrate, each specimen

Test Includes: Adenosine deaminase (AD) concentration measured in U/g Hb.

Logistics

Test Indications: Evaluation of hemolytic anemia of obscure cause. Evaluation of severe combined immunodeficiency (SCID) syndrome.

Lab Testing Sections: Chemistry - Sendouts

Referred to: Mayo Medical Laboratories (Test#: 80649)

Phone Numbers:

Minneapolis: 612-813-6280

Saint Paul: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 10 days, test performed Monday – Friday

Special Instructions: Yellow ACD tubes can be obtained from Children's laboratories.

Specimen

Specimen Type: Whole blood

Container: Yellow top (ACD) tube

Draw Volume: 4 mL (Minimum: 1 mL) blood

Processed Volume: Same as Draw Volume



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Collection:	Routine venipuncture, invert gently to mix.
Special Processing:	Lab Staff: Do Not centrifuge. Whole blood specimen should remain in original collection container. Send specimen at refrigerated temperatures. Forward promptly.
Patient Preparation:	None
Sample Rejection:	Specimen other than ACD or EDTA whole blood, mislabeled or unlabeled specimens

Interpretive

Reference Range: 0.5 – 1.7 U/g Hb

Interpretation:

Hemolytic anemia due to ADA excess: AD 48 U/g Hb to 100 U/g Hb. In severe combined immunodeficiency syndrome, ADA concentrations are <0.3 U/g Hb.

Critical Values: N/A

Limitations: The limit of detection of this assay is such that the result of this test should not be used as an independent diagnostic test for adenosine deaminase deficiency. If clinical or family history or presentation is suggestive of a severe combined immunodeficiency syndrome or variant SCID, consultation with a clinical immunologist is recommended along with additional testing for lymphocyte subset quantitation to determine the immune phenotype. As the diagnostic window is very narrow for this test, some normal healthy individuals can have values below the limit of detection.

Methodology: Kinetic Spectrophotometry (SP)

References: [Mayo Medical Laboratories Web Page](#) (January 2011)

Update: 1/25/2011: Units change, previously listed as IU/g Hb. Reference range update.