CREATIVE BIOMART®
Assay Kit

Adenosine Deaminase Fluorometric Activity Assay Kit

Product Information

Cat.No. Kit-2148

Product Overview

ADA Activity Assay, inosine formed from the breakdown of adenosine is detected via a multi-step reaction, resulting in the formation of an intermediate that reacts with the ADA Probe to generate a fluorescent product. The kit measures total Activity of Adenosine Deaminase with limit of quantification of 10 µU recombinant Adenosine Deaminase. The range of the assay is from 10-100 µU.

Size

100 assays

Description

Adenosine Deaminase (ADA) (E.C. 3.5.4.4.) is an enzyme that catalyzes the conversion of adenosine and 2''-deoxyadenosine to inosine and 2''-deoxyinosine. Adenosine Deaminase is widely distributed in various tissues and cells. There are two isoforms, ADA1 and ADA2. ADA1 is widely expressed in most cells in the body, particularly in lymphocytes and macrophages. It is present in the cytosol, nucleus and found associated with dipeptidyl peptidase-4 on the cell membrane. ADA2 was first found in the spleen but is predominantly found in the plasma and serum. Increased serum ADA levels are found in certain infectious diseases such as tuberculosis and various liver diseases such as acute hepatitis, alcoholic hepatic fibrosis, chronic active hepatitis to name a few. Adenosine Deaminase is also a marker for T-lymphocyte proliferation. I

Applications

Detection of Adenosine Deaminase activity

Storage

Store kit at -20°C, protected from light. Briefly centrifuge small vials prior to opening. Read entire protocol before performing the assay.ADA Assay Buffer (10x): Make 1x Assay Buffer by adding one part 10x Assay Buffer to nine parts deionized water. Store at -20°C or 4°C. Bring to 37°C before use.ADA Convertor and ADA Developer: Reconstitute each with 210 µl ADA Assay Buffer and mix

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gently by pipetting. Briefly centrifuge to collect the contents at the bottom of the tube. Aliquot and store at -20°C. Avoid repeated freeze/thaw.ADA Substrate: Aliquot and store at -20°C. Avoid repeated freeze/thaw.ADA Positive Control: Reconstitute with 22 µl ADA Assay Buffer and mix gently by pipetting. Briefly centrifuge to collect the contents at the bottom of the tube. Aliquot and store at -20°C. Avoid repeated freeze/thaw.

Kit Components

ADA Assay Buffer (10x): 25 mlADA Convertor: 1 VialADA Developer: 1 VialADA Substrate: 500 µlADA Probe: 200 µlADA Positive Control: 1 Viallnosine Standard (10 mM): 100 µl

Detection method Fluorescence (Ex/Em = 535/587 nm)

Compatible Sample Types

• Cell and tissue lysate• Nuclear Extract• Cell Medium• Purified recombinant protein

Features & Benefits

• Rapid, and convenient • The kit measures total Activity of Adenosine Deaminase with limit of quantification 10 µU recombinant Adenosine Deaminase. Range of the assay: 10-100 µU.