CREATIVE BIOMART®
Assay Kit

Lactate Dehydrogenase B (LDHB) Activity Assay Kit

Product Information

Cat.No. Kit-0510

Product Overview

The microplate assay is used to determine Lactate dehydrogenase B activity (LDHB) in a sample utilizing the immunocapture technique. The specific native LDHB enzyme is immune-captured within the wells of the microplate and activity is determined by following the production of NADH catalyzed by the enzyme. The generation of NADH is coupled to the 1:1 reduction of a reporter dye to yield a colored (yellow) reaction product whose concentration can be monitored by measuring the increase in absorbance at 450 nm (Dye molar extinction coefficient-37000 M-1 cm-1). The immune-capture based activity assay kit contains all the required reagents for a fast and simple measurement of LDHB activity in a whole cell extract, tissue homogenate, or serum.

Description

Functional lactate dehydrogenase are homo or hetero tetramers composed of M and H protein subunits encoded by the LDHA and LDHB genes, respectively. The major isozymes of skeletal muscle and liver has four muscle (M) subunits; while the main isozymes for heart muscle contains four (H) subunits. The other variants contain both types of subunits. Elevated levels of LDH indicate tissue breakdown in hemolysis. LDH can be used as a marker of myocardial infarction, peaking at days 3 and lasting through day 10. Other disorders indicated by elevated LDH include cancer, meningitis, encephalitis, acute pancreatitis, and HIV. Defects in LDHB are a cause of hereditary LDHB deficiency; however LDHB deficiency is usually asymptomatic.

Applications

ELISA, WB

Target Species

Reacts with: Goat, Cow, HumanDoes not react with Mouse, Rat

Storage

All components are shipped +4°C. Reagent dye, coupler, LDHB and NAD+ are shipped lyophilized. Before use, rehydrate according to the instructions in Section 6-Reagent Preparation and vortex

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each tube thoroughly to dissolve. After hydration, unused amounts of these four materials should be aliquoted and stored at -20°C, avoiding additional freeze/thaw cycles. Store all other components at 4°C. This kit is Stable for 6 months from receipt.

Kit Components

100X Coupler: Lyophilized, rehydrate in 0.25 mL H2O100X NAD+: Lyophilized, rehydrate in 0.25 mL H2O100X Reagent Dye: Lyophilized, rehydrate in 0.25 mL H2O10X Blocking Buffer: 6ml10X Buffer: 25ml1X LDHB Control: 1μgExtraction Buffer: 15mlReaction Base Buffer: 10mlLDHB Microplate (12 x 8 antibody coated well strips): 96 Wells

Detection method Colorimetric

Compatible Sample Types

Cell culture supernatant, Serum, Plasma, Adherent cells, Tissue Extracts, Cell Lysate, Purified protein

Sensitivity

Theoretical measurable Lowest measured Tested Working Range concentration concentration LDHB 3.42 ng/mL 8.0 ng/mL 8-500 ng/mL Hela Lysate 0.17 μg/mL 0.33 μg/mL 0.33-125 μg/mL

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