CREATIVE BIOMART®
Assay Kit

Creatine Kinase Assay Kit

Product Information

Cat

Kit-2452

Cat.No. Kit-2452

Product Overview

CREATINE KINASE (CK), also known as creatine phosphokinase (CPK), is an enzyme (EC 2.7.3.2) expressed predominantly in skeletal muscle, smooth muscle and the brain. The CK enzyme consists of two subunits, which can be either B (brain type) or M (muscle type), and hence three different isoenzymes: CK-MM, CK-BB and CK-MB. CK catalyzes the conversion of creatine to phosphocreatine, consuming adenosine triphosphate (ATP) and generating adenosine diphosphate (ADP) and the reverse reaction. CK is often determined routinely in emergency patients with chest pain and acute renal failure. Elevation of CK is an indication of damage to muscle and has been associated with injury, rhabdomyolysis, myocardial infarction, myositis, myocarditis, malignant hyperthermia and neuroleptic malignant syndrome, etc. Lower levels can be an indication of alcoholic liver disease and rheumatoid arthritis. Simple, direct and automation-ready procedures for measuring CK activity are very desirable. Creatine Kinase Assay Kit is based on enzyme coupled reactions in which creatine phosphate and ADP is converted to creatine and ATP by CK, the generated ATP is used to phosphorylate glucose by hexokinase to generate glucose-6-phosphate, which is then oxidized by NADP in the presence of glucose-6-phosphate dehydrogenase. The produced NADPH, measured at 340 nm, is proportionate to the CK activity in the sample.

Storage

-20°C

Shipping

On Ice

Size

100 tests

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Detection method OD340nm

Compatible Sample Types

Serum, plasma etc

Features & Benefits

Sensitive and accurate. Detection range: 5 to 300 U/L creatine kinase in 96-well plate assay.
Convenient. The procedure involves adding a single working reagent, and reading the optical density at 20 min and 40 min at room temperature or 37°C.
High-throughput. Can be readily automated as a high-throughput 96-well plate assay for thousands of samples per day.

Assay time

5 min

Sensitivity

5 U/L

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