

Certificate of Analysis

Product Name: Enzyme Creatine Kinase Assay Kit

Catalog No.: Z5030048

Shipping Condition: Dry ice

Storage Condition: Store all reagents at -20°C.

Shelf Life: 6 months from the date of receipt under proper storage conditions

Description

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. BioChain's 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.

Testing Data:

Samples were assayed in duplicate using the 96-well protocol. The CK activity (U/L) was 12.0 ± 0.9 for a rat serum sample, 11.0 ± 0.5 for human serum, 28 ± 1 for human plasma, 9.0 ± 0.8 for mouse serum and 49 ± 2 for bovine serum.

Components

1. One Kit
2. User Manual
3. Certificate of Analysis
4. SDS

FOR IN VITRO RESEARCH USE ONLY

APPROVED BY: _____

