Creatine Kinase Activity

Version: 1
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Summary: Procedure used to determine the creatine kinase activity in blood , serum, and plasma. Creatine kinase activity is measured by the enzymatically coupled reactions of creatine kinase, hexokinase, and glucose-6-P dehydrogenase. The rate of NADPH formation is monitored by the change in absorbance at 340 nm.

Reagents and Materials:

Reagent/Material	Vendor	Stock Number
CK NADP Imidazole Reagent	Cliniqa	R85191
CK NADP Imidazole Buffer	Cliniqa	R85191
Assayed Control Serum 1	Prolabs	R83082
Assayed Control Serum 2	Prolabs	R83083

Protocol: Analysis by automated system Cobas Mira Plus

1) Calibrate Cobas for the measurement of creatine kinase activity analysis by running two control serum.
2) Sample handling as performed by the Cobas Mira Plus.
- **a)** Pipette 4.5 µL of sample into a cuvette slot.
- **b)** Add 175 µL of CK NADP Imidazole Reagent.
- **c)** Mixture is incubated at 37˚C and spun for 10 minutes.
- **d)** Absorbance is measured at 340nm.

Reagent Preparation:

CK NADP Imidazole Reagent: Add the appropriate volume (26mL) of CK NADP Imidazole Buffer to the powdered reagent. Gently invert reagent bottle to stir contents and allow 15 minutes for contents to mix.

CK NADP Imidazole Buffer: As supplied by vendor.

Assayed Control Serum 1: Add the appropriate amount of water (6.5mL) to the chemical control bottle. Invert to mix, allowing 15 minutes for the reagent to settle.

Assayed Control Serum 2: Add the appropriate amount of water (6.5mL) to the chemical control bottle. Invert to mix, allowing 15 minutes for the reagent to settle.