abcam

Product datasheet

Creatinine Assay Kit (Colorimetric) ab204537

8 References 1 Image

Overview

Product name Creatinine Assay Kit (Colorimetric)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
7.981 mg/dl	20			= 2.159%
7.452 mg/dl	20			= 3.203%
2.007 mg/dl	20			= 5.995%
7.326 mg/dl	20			= 3.729%

Inter-assay

Sample	n	Mean	SD	CV%
7.591 mg/dl	20			= 2.249%
7.232 mg/dl	20			= 2.052%
1.932 mg/dl	20			= 2.027%
7.085 mg/dl	20			= 1.433%

Sample type Urine

Assay type Quantitative

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	= 95	92% - 99%

Assay time 0h 30m

Species reactivity **Reacts with:** Mammals, Other species

Product overview

Abcam's Creatinine Assay Kit (Colorimetric) (ab204537) is a complete kit for the quantitative determination of creatinine in urine, and is based upon the Jaffe reaction.

Sensitivity = 0.042 mg/dL.

General range = 0.31 - 20 mg/dL

Notes

Creatinine (2-amino-1-methyl-5H-imadazol-4-one) is a metabolite of phosphocreatine (p-creatine), a molecule used as a store for high-energy phosphate that can be utilized by tissues for the production of ATP. Creatine either comes from the diet or is synthesized from the amino acids arginine, glycine, and methionine. This occurs in the kidneys and liver, although other organ systems may be involved and species-specific differences may exist. Creatine and p-creatine are converted nonenzymatically to the metabolite creatinine, which diffuses into the blood and is excreted by the kidneys. In vivo, this conversion appears to be irreversible and in vitro it is favored by higher temperatures and lower pH2. Creatinine forms spontaneously from p-creatine, and under normal conditions, its formation occurs at a relatively constant rate. Intra-individual variation of creatinine levels is <15% from day to day, making it a useful marker for normalizing levels of other molecules found in urine. Altered creatinine levels may be associated with conditions that result in decreased renal blood flow, such as diabetes and cardiovascular disease.

Platform

Microplate reader

Properties

Storage instructions

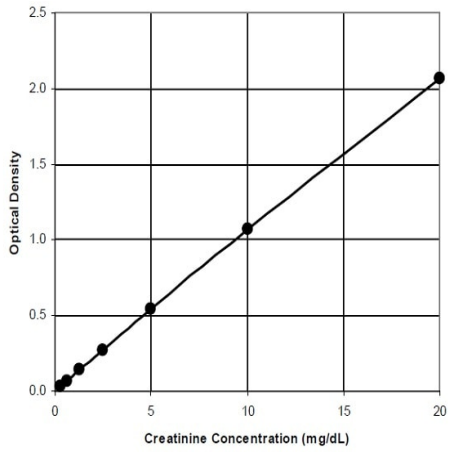
Store at +4°C. Please refer to protocols.

Components	2 x 96 tests
Clear Microtiter Plates	2 units
Creatinine Detection Reagent	1 x 20ml
Creatinine Standard	1 vial
Plate Sealer	2 units

Relevance

Creatinine, or creatine anhydride, is a breakdown product of creatine phosphate in muscle. The loss of water molecule from creatine results in the formation of creatinine. Creatinine is transferred to the kidneys by blood plasma, whereupon it is eliminated from the body by glomerular filtration and partial tubular excretion. Creatinine is usually produced and excreted at a fairly constant rate, and blood creatinine is used to determine glomerular filtration rate (GFR), a measure of kidney function.

Images



Typical standard curve obtained using Creatinine Assay Kit (Colorimetric) (ab204537).

Typical standard curve obtained using Creatinine Assay Kit (Colorimetric) (ab204537) which is a complete kit for the quantitative determination of creatinine in urine, and is based upon the Jaffe reaction.

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