SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

StressXpress®

Creatinine Serum Detection Kit

Colorimetric measurement of creatinine
Catalog No. SKT-217

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Overview

Product Name

Creatinine Serum Detection Kit

Description

Colorimetric measurement of creatinine

Species Reactivity

Human, Mouse, Rat, Rabbit, Sheep

Platform

Microplate

Sample Types

Plasma, Serum

Detection Method

Colorimetric Assay

Assay Type

Direct Quantitative Assay

Utility

Colorimetric assay used to measure creatinine in samples.

Sensitivity

0.081 mg/dl

Assay Range

0.5 - 4 mg/dl

Precision

Intra Assay Precision: Three human serum samples were run in replicates of 20 in an assay. The mean and precision of the calculated creatinine concentrations were:
Sample 1- 0.99 mg/dL, 7.9% CV
Sample 2- 1.50 mg/dL, 6.3% CV
Sample 3- 3.82 mg/dL, 4.5% CV Inter Assay Precision: Three human serum samples were run in duplicates in 19 assays run over two years by four operators. The mean and precision of the calculated creatinine concentrations were:
Sample 1- 0.91 mg/dL, 9.6% CV
Sample 2- 1.26 mg/dL, 7.3% CV
Sample 3- 3.51 mg/dL, 8.0% CV

Number Of Samples

91 samples in duplicate

Other Resources

MSDS

Properties

Storage Temperature

4ºC

Shipping Temperature

Blue Ice

Product Type

Detection Kits

Assay Overview

The Creatinine Serum Detection Kit is designed to quantitatively measure creatinine present in serum samples. A creatinine standard, calibrated to a NIST creatinine standard, is provided to generate a standard curve for the assay and all samples should be read off the standard curve. Standards or samples are pipetted into a clear microtiter plate. An assay diluent is added to all standards, controls and samples. The color generating reaction is initiated with the StressXpress® Creatinine Reagent, which is pipetted into each well.

The assay utilizes a kinetic absorbance method to overcome interference by colored compounds in serum. The absorbance of the colored product is read after 1 minute in a microtiter plate reader capable of measuring 490nm wavelength. At 30 minutes the optical density is read again. The concentration of creatinine is calculated using the delta of the optical density readings at 30 and 1 minute compared to the curve generated from the standards, or by using the Excel worksheet available for free download at our web site. The Jaffe reaction used in this kit has been modified to read creatinine levels in serum,8.

Kit Components

Component No.	Item	Quantity / Size
SKC-217A		
	Clear 96 well Half Area Plates	
		2 Plates
SKC-217B		
	Creatinine Standard	
		100 µl
SKC-217C		
	Assay Diluent	
		6 ml
SKC-217D		
	StressXpress® Creatinine Reagent	
		20 ml

Cite This Product

Creatinine Serum Detection Kit (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SKT-217)

Biological Description

Alternative Names

N-Carbamimidoyl-N-methylglycine Detection Kit, Methylguanidoacetic acid Detection Kit

Research Areas

Cardiovascular System, Cell Signaling

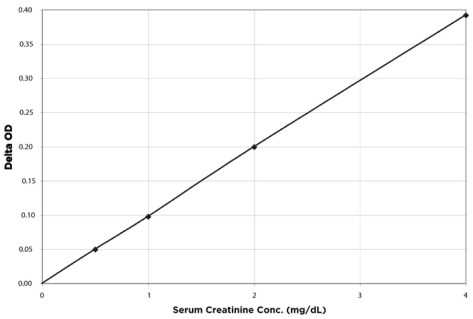
Scientific Background

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 (1). Creatine either comes from the diet or 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 (2). Creatine and p-creatine are converted non-enzymatically 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 (3). Under normal conditions, its formation occurs at a rate that is relatively constant and as intra-
individual variation is <15% from day to day, creatinine is a useful tool for normalizing the levels of other molecules found in urine. Additionally altered creatinine levels may be associated with other conditions that result in decreased renal blood flow such as diabetes and cardiovascular disease (4-6).

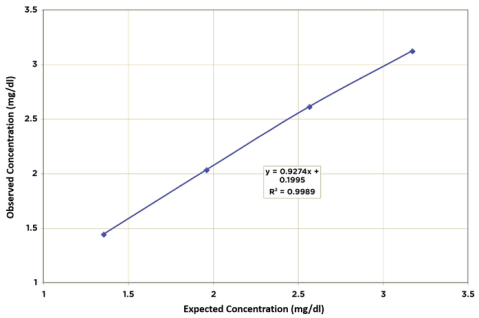
References

1. Wallimann, T. et al., Biochem. J., 2000, 281, 21-40.
2. Wyss, M. and Kaddurah-Daouk, R., Physiol. Rev., 2000, 80, 1107-1213.
3. Raja Iyengar, M. et al., J. Biol. Chem, 1985, 260, 7562-7567.
4. Manjunath, G. et al., Postgrad. Med. 2001, 110, 55-62.
5. Gross, J.L. et al., Diabetes Care, 2005, 28, 164-176.
6. Anavekar, N.S. et al., New Engl. J. Med., 2004, 351, 1285-1295.

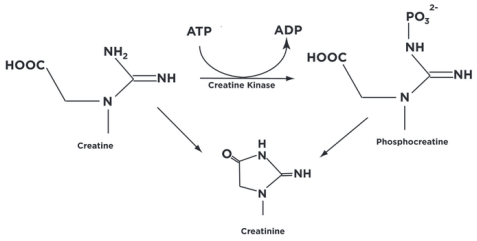
Product Images



Typical Standard Curve for Creatinine Serum Detection Kit StressXpress® – SKT-217. Assay Type: Direct Enzyme. Detection Method: Colorimetric Assay. Assay Range: 0.5 – 4 mg/dl.



Linearity was determined by taking two human serum samples, one with a low diluted creatinine level of 0.75 mg/dL and one with a higher level of 3.78 mg/dL and mixing them in given ratios. The measured concentrations were compared to the expected values.



Creatine and p-creatine are converted non-enzymatically 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.

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.