Datasheet for ABIN1125223

CPS1 ELISA Kit

1 Validation

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Overview

Quantity:	96 tests
Target:	CPS1
Binding Specificity:	Mitochondrial
Reactivity:	Human
Application:	ELISA

Product Details

Detection Method:	Colorimetric
Characteristics:	Homo sapiens,Human,Carbamoyl-phosphate synthase [ammonia], mitochondrial,Carbamoyl-phosphate synthetase I,CPSase I,CPS1,6.3.4.16
Components:	Reagent (Quantity): Assay plate (1), Standard (2), Sample Diluent (1x20ml), Assay Diluent A (1x10ml), Assay Diluent B (1x10ml), Detection Reagent A (1x120µl), Detection Reagent B (1x120µl), Wash Buffer(25 x concentrate) (1x30ml), Substrate (1x10ml), Stop Solution (1x10ml)

Target Details

Target:	CPS1
Alternative Name:	CPS1 (CPS1 Products)
Background:	Synonyms: Carbamoyl-phosphate synthase [ammonia], mitochondrial,Carbamoyl-phosphate synthetase I,CPS1,CPSase I,Homo sapiens,Human
Pathways:	Response to Growth Hormone Stimulus, Cellular Glucan Metabolic Process

Application Details

Comment:	Gene Name: CPS1
Sample Volume:	100 µL
Plate:	Pre-coated
Restrictions:	For Research Use only

Handling

Storage:	4 °C/-20 °C
Storage Comment:	The Standard, Detection Reagent A, Detection Reagent B and the 96-well strip plate should be stored at -20 °C upon being received. The other reagents can be stored at 4 °C.

Validation report #103213 for ELISA (ELISA)

Successfully validated (ELISA (ELISA))

by Omary Lab, Department of Molecular & Integrative Physiology, University of Michigan Medical School

Report Number: 103213

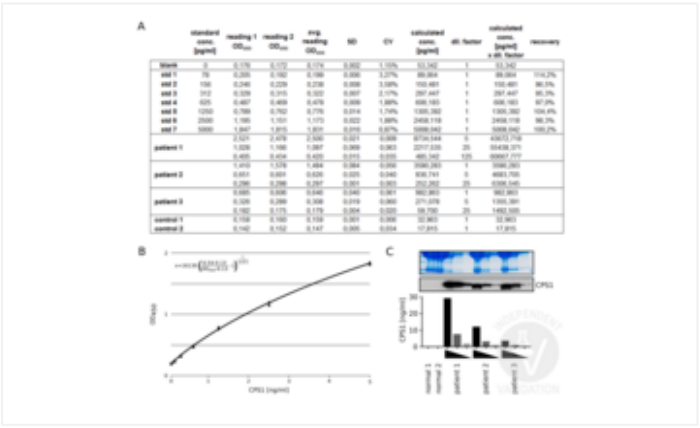
Date: Jun 11 2018

Target:	CPS1
Lot Number:	7K295N
Method validated:	ELISA (ELISA)
Positive Control:	Human serum from patients with liver injury
Negative Control:	Human serum from patients without liver injury
Notes:	Passed, the CPS1 ELISA kit ABIN1125223 specifically detects the antigen in human serum samples.
Protocol:	• Freeze human serum samples in aliquots until use. Dilute sera with PBS. • Allow all reagents to reach RT and prepare all the reagents, standard solutions and samples as instructed by the manufacturer. • Add 100µl of standard, blank or sample per well. Cover the plate. Incubate for 2h at 37°C. • Remove the liquid. • Add 100µl detection reagent A. Mix gently and cover the plate. Incubate for 1h at 37°C. • Aspirate liquid and wash the wells 3x with 400µl wash buffer. Let it sit for 1-2min. Remove liquid Completely at each step. • Add 100µl of detection reagent B. Cover the plate. Incubate for 1h at 37°C. • Wash well 5x with 400µl wash buffer. • Add 90µl substrate solution. Cover the plate. Incubate 15min at 37°C protected from light. • Add 50µl stop solution. Gently tap the plate to ensure thorough mixing. • Read absorbance at 450nm immediately.
Experimental Notes:	• The purpose of this report is to validate the measurement of human CPS1 in human serum samples, since it has been published that CPS1 is released into serum during liver injury, while it is not detected in healthy human serum (Weerasinghe et al. (2014)). • To validate this ELISA, human serum samples previously validated to contain CPS1 by Western blotting were used. The signal in the positive controls samples (patients' samples that contain high amount of CPS1 which was confirmed by Western blotting) was significantly higher than the blank whereas the signal from the negative control samples (healthy human sera in that CPS1 was not detected by Western blotting) was comparable to the baseline. 1:5, 1:25, or 1:125 diluted serum samples were tested as well. • CPS1 was not detected in the sera of healthy human by both western blotting and ELISA

method (lane 1 and 2). However, it is highly increased in the sera of patients with acute liver failure and the signals were in a dilution-dependent manner (lane 3 to 11).

- The standard curve for the assays reported were fitted with a 4-Parameter Logistic model. The calculated concentrations of standards were higher than expected, but it gave a good quality fits (R^2=0.999). The results showed no CPS1 in the sera from healthy human, while it is highly increased in the sera from patients with liver injury, as expected. Although most of the samples were in the detection range, the calculated concentrations were highest in the most diluted samples.

Image for Validation report #103213



Validation image no. 1 for Carbamoyl-Phosphate Synthase 1, Mitochondrial (CPS1) ELISA Kit (ABIN1125223)

A. Standard curve and sample measurements using ABIN1125223. B. The standard curves for the assays reported were fitted with a 4-Parameter Logistic model, giving good quality fits (R^2=0.999). C. CPS1 level comparison determined by western blotting and ABIN1125223. Normal serum from healthy humans was used undiluted. Serum from patient 1 was used undiluted, 1:5, and 1:25 diluted (middle panel). Sera from patient 2 and patient 3 were used at 1:5, 1:25, and 1:125 dilutions. 2µl of serum was used for Western blotting; presence of proteins was verified by Commassie staining (upper panel). The graph illustrates the ELISA results.