



User's Manual

Human α 1-antichymotrypsin ELISA Kit

REF

DEIABL560



96T

RUO

This product is for research use only and is not intended for diagnostic use.

For illustrative purposes only. To perform the assay the instructions for use provided with the kit have to be used.

Creative Diagnostics

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PRODUCT INFORMATION

Intended Use

This Kit is used for the quantitative measurement of human α 1-antichymotrypsin (α 1-ACT) in serum, plasma, cell lysate, saliva, tear and milk.

General Description

α 1-antichymotrypsin (α 1-ACT), also called SERPINA3, is an acute phase serum glycoprotein that belongs to a member of the serine protease inhibitor family. α 1-ACT inhibits the activity of certain leukocyte-derived proteases, such as cathepsin G that is found in neutrophils, chymases found in mast cells and Prostate-specific Antigen (PSA) by cleaving them into a different shape or conformation. This activity protects some tissues, such as the lower respiratory tract, from damage caused by proteolytic enzymes.

Although α 1-ACT is predominantly produced in the liver, it is also synthesized in the brain, mainly by astrocytes. Elevated levels of α 1-ACT are found in serum, brain and cerebrospinal fluid of Alzheimer's disease patients, and high levels of α 1-ACT in plasma is associated with cognitive decline in elderly subjects.

Earlier studies have shown that α 1-ACT enhances amyloid beta fibrillization and accelerated plaque formation in Amyloid precursor protein transgenic mice. Later studies have shown that purified α 1-ACT induces tau hyperphosphorylation and degeneration in neurons.

In addition, α 1-ACT elevation in tear fluid emerges as a promising biomarker for the diagnosis of multiple sclerosis.

Reagents And Materials Provided

Microplate

10X Wash Buffer

Dilution Buffer

Human α 1-ACT Standard

HRP conjugated Detection Antibody

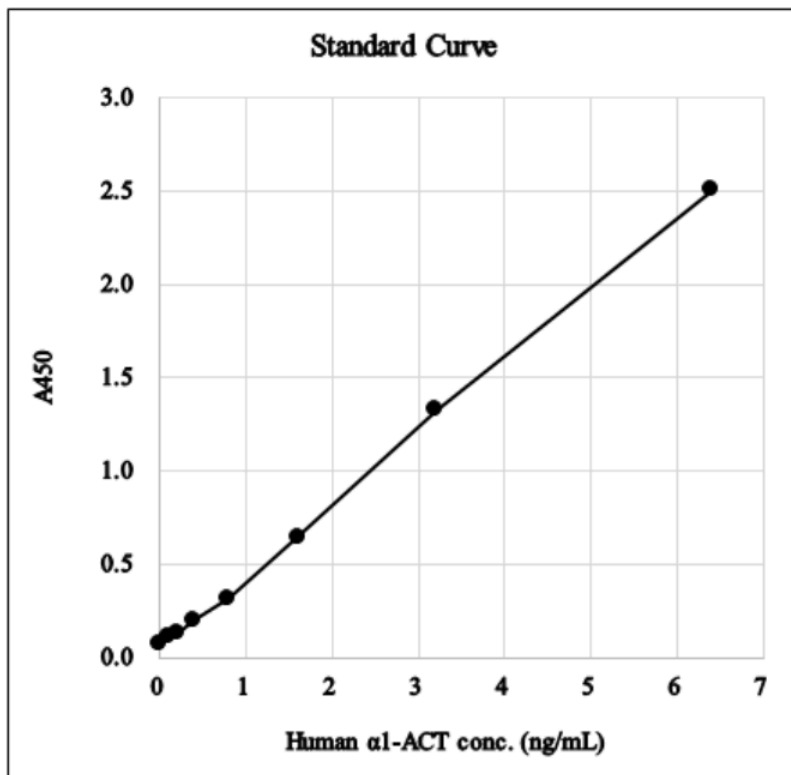
Substrate Reagent

Stop Solution

Storage

- Upon receipt store all components at 4°C.
- Don't expose reagents to excessive light.

Typical Standard Curve



Precision

Intra-assay (Within-Run, n=16) CV=3.5-7.2%

Inter-assay (Run-to-Run, n=8) CV=2.8-5.7%

Sensitivity

The limit of detection (defined as such a concentration of human α 1-ACT giving absorbance higher than mean absorbance of blank* plus three standard deviations of the absorbance of blank: A blank + 3SD blank) is better than 0.08 ng/mL of sample.