CREATIVE BIOMART®
Assay Kit

Carbonic Anhydrase (CA) Activity Assay Kit (Colorimetric)

Product Information

Cat

Kit-1116

Cat.No. Kit-1116

Description

Carbonic anhydrases (CA) (CA, 4.2.1.1) are zinc enzymes present in both prokaryotes and eukaryotes. They catalyze efficiently the reversible hydration of CO2 to bicarbonate. Their important patho-physiological roles in respiration, pH and CO2 homeostasis, secretion, gluconeogenesis, ureagenesis etc. make it an important drug target. Characteristic increase and decrease of CA Activity is observed in different physiological conditions and diseases such asanemia, Thalassemia, Hypothyroidism, Hyperthyroidism, in several cases of lung and liver diseases and Leukemia. CA Activity Assay Kit can be used to measure CA activity in biological samples like serum and hemolysates. The assay utilizes the esterase activity of an active CA on an ester substrate which releases a chromophore. The released product can be easily quantified using an absorbance microplate reader. In the presence of a CA specific inhibitor, the enzyme loses its activity which results in a decrease of absorbance. This assay kit is simple and can be used to measure CA activity in biological samples like hemolysate, serum and purified CA activity, CA activity in biological samples like hemolysate and serum in a high-throughput format. To measure the Specific CA activity we have used the specific inhibitor Acetazolamide, which is a potent inhibitor of CA I, CA II, CA IV, CA IX, CA XII etc. except CA III.

Applications

Detection of CA activity in hemolysates, serum;
Determination of enzymatic activity of purified CA

Storage

-20°C

Shipping

Gel Pack

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Size

100 assays

Kit Components

CA Assay Buffer; CA Dilution Probe; CA Positive Control; CA Substrate; CA Inhibitor (20 mM Acetazolamide); Nitrophenol Standard (2 mM)

Target Species

Mammalian

Detection method Detection method - Colorimetric (OD 405 nm)

Features & Benefits

Simple, highly sensitive, high-throughput compatible;
Easy protocol for the detection and quantification of active CA;
Kit includes Acetazolamide, a CA inhibitor, and a stable, recombinant human CA

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