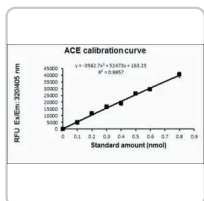




Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



All Photos (4)

Documents



SDS



COO/COA



Specification Sheet

CS0002 ▶ Sigma-Aldrich.

Angiotensin I Converting Enzyme (ACE) Activity Assay Kit (Fluorometric)

★ ★ ★ ★ ★ 1.0 (1)

sufficient for 200 fluorometric tests

Synonym(s):

ACE Assay Kit

SKU	Pack Size	Availability	Price	Quantity
CS0002-1KT	1 KIT	✓ Available to ship on October 08, 2022	Details... ₹56,737.80	<input type="text" value="1"/>

[Request a Bulk Order](#)

[Add to Cart](#)

RECOMMENDED PRODUCTS

Sigma-Aldrich

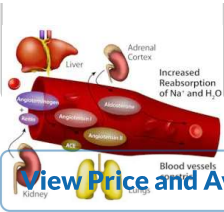
A6778

Angiotensin Converting Enzyme from rabbit

Sigma-Aldrich

MAK378


Angiotensin II Converting Enzyme (ACE2)



lung

≥2.0 units/mg protein (modified Warburg-Christian)

[View Price and Availability](#)



Inhibitor Screening Kit

100 fluorometric tests

[View Price and Availability](#)

PROPERTIES

usage	sufficient for 200 fluorometric tests
shipped in	dry ice
storage temp.	−20°C

Related Categories

[Metabolism Assay Kits](#)

DESCRIPTION

General description

The Angiotensin I Converting Enzyme (ACE) Activity Assay is based on the cleavage of a synthetic fluorogenic peptide. The measured fluorescence is directly proportional to the ACE activity present. The reaction is summarized as follows: ACE
ACE Fluorogenic substrate —————> Cleaved ACE Substrate + fluorescent product (λ_{ex} 320nm/ λ_{em} 405nm)

The ACE Positive Control in the kit can be used to screen for ACE inhibitors. This kit has a linear range of 1.5-110 mU of ACE

activity.

Angiotensin Converting Enzyme (ACE) is a key component in the renin-angiotensin system (RAS), which is well known for its role in the regulation of blood pressure, electrolyte balance, and vascular remodeling^{1,2}. ACE is located mainly in the capillaries of the lungs, but can also be found in endothelial and kidney epithelial cells³. This hormone system also regulates body fluids volume. Renin produces angiotensin I by cleaving several amino acids from angiotensinogen. ACE then hydrolyzes angiotensin I to yield active angiotensin II. Angiotensin II also stimulates the adrenal cortex to secrete aldosterone, which also causes an increase in blood pressure by stimulating sodium reabsorption by the kidney¹. Since ACE exhibits critical functions regulating RAS, ACE inhibition has become a promising approach for drug targeting in the treatment of cardiovascular diseases such as hypertension, heart failure, and diabetic nephropathy.

The detection range : 1.5-110 mU of ACE activity.

Application

- Detection of ACE1 activity in Tissue/Cell lysates, Serum, Plasma
- Enables to screen for ACE inhibitors

Features and Benefits

Our economical ACE Kit also saves your time and efforts:

- A simple, quick, sensitive, and direct procedure for measuring ACE levels in a variety of samples such as serum and plasma
- Enables to screen for ACE inhibitors
- Supportive calculator ([Click here to download a calculator excel file](#)):will calculate the reagents needed according to your experimental needs, and analyses your results based on your experimental data!
- User friendly: No need to weigh or mix multiple reagents
- Quick instruction bench card – to assure your experimental success

- More experiments in one kit - contains sufficient reagents for 200 tests.

Unit Definition

One unit of ACE is defined as the amount of enzyme that releases 1 nmol of fluorescent product from the substrate, in 1 minute, under the assay conditions, at 37 °C. This kit contains sufficient reagents for 200 tests.

SAFETY INFORMATION

Storage Class Code

10 - Combustible liquids

WGK

WGK 3

Flash Point(F)

188.6 °F

Flash Point(C)

87 °C

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

e.g. 023J5431

How to enter Lot Number (COA)

Search

Certificate of Origin

Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

e.g. 023J5431

How to enter Lot Number (COO)**Search**

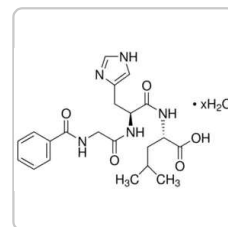
CUSTOMERS ALSO VIEWED



Sigma-Aldrich

CS1090**HMG-CoA Reductase Assay Kit**

sufficient for 30 assays (1 mL), sufficient for 100 assays (200 µL)

[View Price and Availability](#)

Sigma-Aldrich

H1635**N-Hippuryl-His-Leu hydrate**

powder, ≥98% (HPLC)

[View Price and Availability](#)

PEER REVIEWED PAPERS

A biaryl-linked tripeptide from *Planomonospora* reveals a widespread class of minimal RiPP gene clusters.**Mitja M Zdouc et al.***Cell chemical biology*, 28(5), 733-739 (2020-12-16)

Microbial natural products impress by their bioactivity, structural diversity, and ingenious biosynthesis. While screening the less exploited actinobacterial genus *Planomonospora*, two cyclopeptides were discovered, featuring an unusual Tyr-His biaryl bridging across a tripeptide scaffold, with the sequences N-acetyl-Tyr-Tyr-His and N-acetyl-Tyr-Phe-His.

Sex differences in the lung ACE/ACE2 balance in hypertensive rats.

Flavia L Martins et al.

Bioscience reports, 41(12) (2021-11-10)

The angiotensin-converting enzyme (ACE)/Angiotensin II (Ang II) and angiotensin-converting enzyme 2 (ACE2)/angiotensin-(1-7) (Ang-(1-7)) pathways are coexpressed in most tissues. The balance between these pathways determines, at least in part, whether tissue damage will occur in response to pathological stimuli. The

Increased plasma bradykinin level is associated with cognitive impairment in Alzheimer's patients.

Pradeep K Singh et al.

Neurobiology of disease, 139, 104833-104833 (2020-03-17)

Alzheimer's disease (AD) is characterized by the presence of proteinaceous brain deposits, brain atrophy, vascular dysfunction, and chronic inflammation. Along with cerebral inflammation, peripheral inflammation is also evident in many AD patients. Bradykinin, a proinflammatory plasma peptide, is also linked

In Silico Analysis and In Vitro Characterization of the Bioactive Profile of Three Novel Peptides Identified from 19 kDa α -Zein Sequences of Maize.

Jorge L Díaz-Gómez et al.

Molecules (Basel, Switzerland), 25(22) (2020-11-25)

In this study, we characterized three novel peptides derived from the 19 kDa α -zein, and determined their bioactive profile in vitro and developed a structural model in silico. The peptides, 19ZP1, 19ZP2 and 19ZP3, formed α -helical structures and had positive

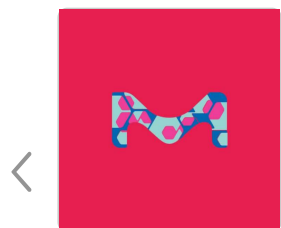
Pharmacologic ACE-Inhibition Mitigates Radiation-Induced Pneumonitis by Suppressing ACE-Expressing Lung Myeloid Cells.

Guru Prasad Sharma et al.

International journal of radiation oncology, biology, physics, 113(1), 177-191 (2022-01-31)

Radiation-induced lung injury is a major dose-limiting toxicity for thoracic radiation therapy patients. In experimental models, treatment with angiotensin converting enzyme (ACE) inhibitors mitigates radiation pneumonitis; however, the mechanism of action is not well understood. Here, we evaluate the direct

RECENTLY VIEWED PRODUCTS



Sigma-Aldrich

CS0010 **β -Secretase (BACE1) Activity Detection Kit (Fluorescent)**

kit sufficient for 250 reactions

[View Price and Availability](#)

Sigma-Aldrich

CS0030**Senescence Cells Histochemical Staining Kit**

sufficient for 100 tests

[View Price and Availability](#)

TECHNICAL SERVICE

Our team of scientists has experience in all areas of research including Life Science, Material Science, Chemical Synthesis, Chromatography, Analytical and many others.

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