

Product datasheet

Angiotensin II Converting Enzyme (ACE2) Activity Assay Kit (Fluorometric) ab273297

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Overview

Product name	Angiotensin II Converting Enzyme (ACE2) Activity Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Tissue, Adherent cells, Suspension cells
Assay type	Enzyme activity (quantitative)
Sensitivity	400 µU
Assay duration	Multiple steps standard assay
Product overview	Angiotensin II Converting Enzyme (ACE2) Activity Assay Kit (Fluorometric) (ab273373) utilizes the ability of an active ACE2 to cleave a synthetic MCA based peptide substrate to release a free fluorophore. The released MCA can be easily quantified using a fluorescence microplate reader. We also provide an ACE2 specific inhibitor that can differentiate the ACE2 activity from other proteolytic activity. The kit can detect as low as 0.4 mU. The assay kit is simple and can be used in a high-throughput format. A negative control should be run for each sample to differentiate ACE2 activity from other proteolytic activity in your sample
Notes	This product is manufactured by BioVision, an Abcam company and was previously called K897 Angiotensin II Converting Enzyme (ACE2) Activity Assay Kit (Fluorometric). K897-100 is the same size as the 100 test size of ab273297.
Platform	Microplate

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	100 tests
ACE2 Dilution Buffer	1 x 1.5ml
ACE2 Inhibitor	1 x 50µl

Components	100 tests
ACE2 Lysis Buffer	1 x 50ml
ACE2 Enzyme	1 x 20µl
ACE2 Substrate	1 x 200µl
Assay Buffer XI	1 x 25ml
MCA Standard	1 x 25µl

Function

Carboxypeptidase which converts angiotensin I to angiotensin 1-9, a peptide of unknown function, and angiotensin II to angiotensin 1-7, a vasodilator. Also able to hydrolyze apelin-13 and dynorphin-13 with high efficiency. May be an important regulator of heart function. In case of human coronaviruses SARS and HCoV-NL63 infections, serve as functional receptor for the spike glycoprotein of both coronaviruses.

Tissue specificity

Expressed in endothelial cells from small and large arteries, and in arterial smooth muscle cells. Expressed in lung alveolar epithelial cells, enterocytes of the small intestine, Leydig cells and Sertoli cells (at protein level). Expressed in heart, kidney, testis, and gastrointestinal system.

Sequence similarities

Belongs to the peptidase M2 family.

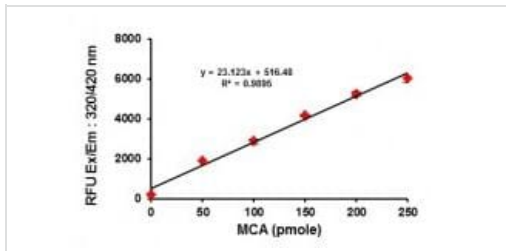
Post-translational modifications

N-glycosylation on Asn-90 may limit SARS infectivity.

Cellular localization

Secreted and Cell membrane.

Images

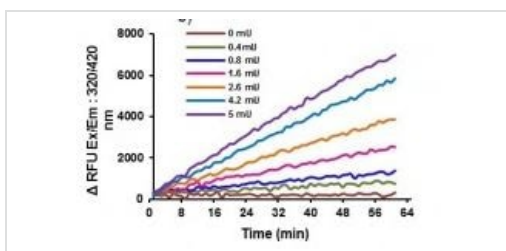


MCA Standard Curve

Typical standard curve – data provided for demonstration

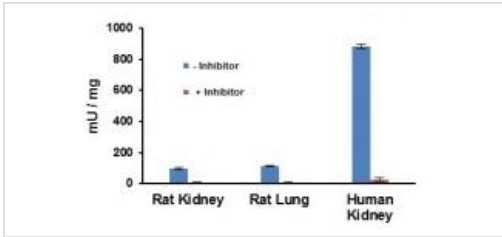
purposes only. A new standard curve must be generated for each assay performed.

MCA Standard Curve (0-300 pmol), error bars indicate SD (n=3).



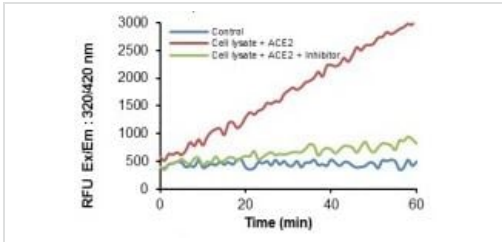
Kinetic activity curves

Kinetic activity curves using different amounts of ACE2 Positive Control in the assay.



ACE2 Activity in Tissue Samples

ACE2 activity was measured for different types of rat tissue samples (total protein in lung and kidney; 17 µg and 23 µg respectively), and human kidney tissue sample (10 µg total protein) in presence (+ Inhibitor) and absence (- Inhibitor) of ACE2 Inhibitor.



Spiked ACE2 activity and inhibition measured in HEK-293 cell lysate

Spiked ACE2 activity and inhibition measured in HEK-293 cell lysate (total protein: 37 µg).

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