

# ACE Assay Kit (Angiotensin I Converting Enzyme) ab239703

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Overview

Product name	ACE Assay Kit (Angiotensin I Converting Enzyme)
Detection method	Fluorescent
Sample type	Serum, Plasma, Cell culture extracts, Tissue
Assay duration	One step assay
Species reactivity	<b>Reacts with:</b> Mammals
Product overview	ACE Assay Kit (Angiotensin I Converting Enzyme) (ab239703) utilizes an active ACE1 to cleave a synthetic o-aminobenzoyl peptide (Abz-based peptide) substrate to release a fluorophore. The released Abz can be easily quantified using a fluorescence microplate reader. This assay kit is simple, rapid and can detect ACE activity as low as 10 mU in biological samples, such as lung, heart and kidney tissue, and serum and plasma. It can also be used to determine the enzymatic activity of purified ACE1.
Notes	This product is manufactured by BioVision, an Abcam company and was previously called K227 Angiotensin I Converting Enzyme Activity (ACE1) Assay Kit (Fluorometric). K227-100 is the same size as the 100 test size of ab239703.
Platform	Microplate reader

Properties

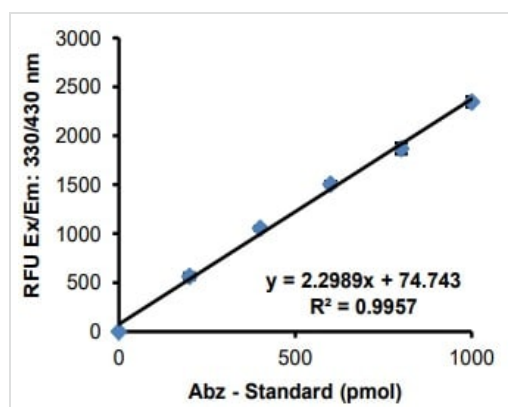
Storage instructions      Store at -20°C. Please refer to protocols.

Components	100 tests
Abz Standard	1 x 100µl
ACE1 Assay Buffer	1 x 20ml
ACE1 Dilution Buffer	1 x 1ml
ACE1 Lysis Buffer	1 x 40ml
ACE1 Positive control	1 x 5µl

Components	100 tests
ACE1 Substrate	1 x 300µl

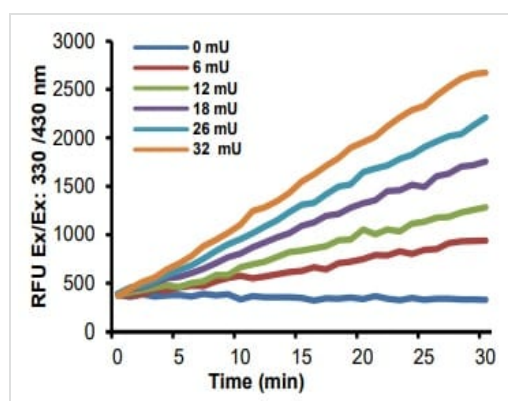
<b>Function</b>	Converts angiotensin I to angiotensin II by release of the terminal His-Leu, this results in an increase of the vasoconstrictor activity of angiotensin. Also able to inactivate bradykinin, a potent vasodilator. Has also a glycosidase activity which releases GPI-anchored proteins from the membrane by cleaving the mannose linkage in the GPI moiety.
<b>Tissue specificity</b>	Ubiquitously expressed, with highest levels in lung, kidney, heart, gastrointestinal system and prostate. Isoform Testis-specific is expressed in spermatocytes and adult testis.
<b>Involvement in disease</b>	<p>Ischemic stroke (ISCHSTR) [MIM:601367]: A stroke is an acute neurologic event leading to death of neural tissue of the brain and resulting in loss of motor, sensory and/or cognitive function. Ischemic strokes, resulting from vascular occlusion, is considered to be a highly complex disease consisting of a group of heterogeneous disorders with multiple genetic and environmental risk factors. Note=Disease susceptibility is associated with variations affecting the gene represented in this entry.</p> <p>Renal tubular dysgenesis (RTD) [MIM:267430]: Autosomal recessive severe disorder of renal tubular development characterized by persistent fetal anuria and perinatal death, probably due to pulmonary hypoplasia from early-onset oligohydramnios (the Potter phenotype). Note=The disease is caused by mutations affecting the gene represented in this entry.</p> <p>Microvascular complications of diabetes 3 (MVCD3) [MIM:612624]: Pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis. Note=Disease susceptibility is associated with variations affecting the gene represented in this entry.</p> <p>Intracerebral hemorrhage (ICH) [MIM:614519]: A pathological condition characterized by bleeding into one or both cerebral hemispheres including the basal ganglia and the cerebral cortex. It is often associated with hypertension and craniocerebral trauma. Intracerebral bleeding is a common cause of stroke. Note=Disease susceptibility is associated with variations affecting the gene represented in this entry.</p>
<b>Sequence similarities</b>	Belongs to the peptidase M2 family.
<b>Post-translational modifications</b>	Phosphorylated by CK2 on Ser-1299; which allows membrane retention.
<b>Cellular localization</b>	Secreted and Cell membrane.

## Images



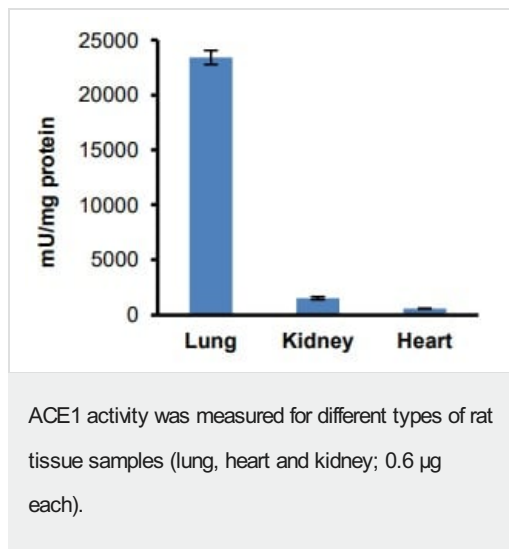
Abz-Standard Curve (0-1000 pmol), error bars indicate SD (n=3).

Abz-Standard Curve



Kinetic activity curves using different amounts of ACE1. Positive Control in the assay.

Kinetic activity curves using different amounts of ACE1



ACE1 activity was measured for different types of rat tissue samples (lung, heart and kidney; 0.6  $\mu$ g each). Assays were performed following the kit protocol.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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