Datasheet for ABIN1672755

Angiotensin I Converting Enzyme 1 ELISA Kit

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Overview

Quantity:	96 tests
Target:	Angiotensin I Converting Enzyme 1 (ACE)
Binding Specificity:	AA 35-1264
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	93.8-6000 pg/mL
Minimum Detection Limit:	93.8 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse ACE
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: L35-Q1264
Specificity:	Expression system for standard: NSO Immunogen sequence: L35-Q1264
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

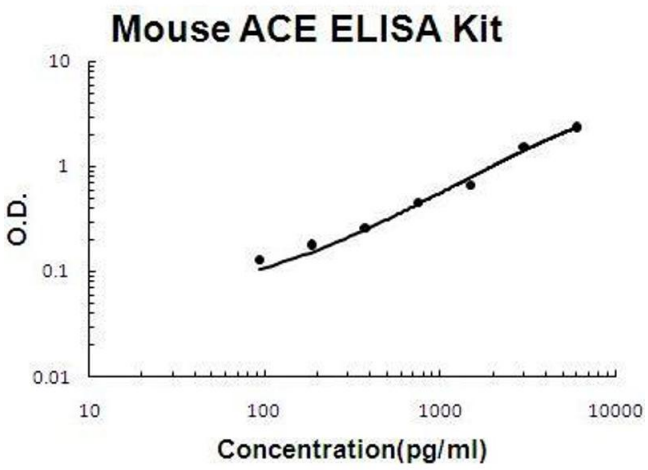
Target:	Angiotensin I Converting Enzyme 1 (ACE)
Alternative Name:	ACE (ACE Products)
Background:	Protein Function: Converts angiotensin I to angiotensin II by release of the terminal His-Leu, this results in an increase of the vasoconstrictor activity of angiotensin. Also able to inactivate bradykinin, 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. This GPIase activity seems to be crucial for the egg-binding ability of the sperm. . Background: Angiotensin-converting enzyme(ACE), an exopeptidase, is a circulating enzyme that participates in the body's renin-angiotensin system(RAS), which mediates extracellular volume(i.e. that of the blood plasma, lymph and interstitial fluid), and arterial vasoconstriction. It is secreted by pulmonary and renal endothelial cells and catalyzes the conversion of decapeptide angiotensin I to octapeptide angiotensin II. Using a DNA marker at the growth hormone gene locus, which they characterized as 'extremely polymorphic' and which showed no recombination with ACE, ACE was mapped to 17q22-q24, consistent with the in situ hybridization mapping to 17q23. ACE, or kininase II, is a dipeptidyl carboxypeptidase that plays an important role in blood pressure regulation and electrolyte balance by hydrolyzing angiotensin I into angiotensin II, a potent vasopressor, and aldosterone-stimulating peptide. The enzyme is also able to inactivate bradykinin, a potent vasodilator. Synonyms: Angiotensin-converting enzyme,ACE,3.2.1.-,3.4.15.1,Dipeptidyl carboxypeptidase I,Kininase II,CD143,Angiotensin-converting enzyme, soluble form,Ace,Dcp1, Full Gene Name: Angiotensin-converting enzyme Cellular Localisation: Angiotensin-converting enzyme, soluble form: Secreted.
Gene ID:	11421
UniProt:	P09470
Pathways:	ACE Inhibitor Pathway, Peptide Hormone Metabolism, Regulation of Systemic Arterial Blood Pressure by Hormones, Feeding Behaviour, Smooth Muscle Cell Migration

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Tissue Specificity: Testis-specific isoform is expressed in spermatocytes, adult testis.
Plate:	Pre-coated
Protocol:	mouse ACE ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for ACE has been precoated onto 96-well plates. Standards(NSO, L35-Q1264) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for ACE is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse ACE amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 6000pg/mL, 3000pg/mL, 1500pg/mL, 750pg/mL, 375pg/mL, 187.5pg/mL, 93.8pg/mL mouse ACE standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse cell culture supernates, serum or plasma(heparin) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each mouse ACE standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(ng/ml): 0.64, Standard deviation: 0.029, CV(%): 4.6 • Sample 2: n=16, Mean(ng/ml): 1.98, Standard deviation: 0.085, CV(%): 4.3 • Sample 3: n=16, Mean(ng/ml): 4.25, Standard deviation: 0.179, CV(%): 4.2, • Sample 1: n=24, Mean(ng/ml): 0.85, Standard deviation: 0.062, CV(%): 7.3 • Sample 2: n=24, Mean(ng/ml): 2.02, Standard deviation: 0.141, CV(%): 7 • Sample 3: n=24, Mean(ng/ml): 5.32, Standard deviation: 0.367, CV(%): 6.9
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months



ELISA

Image 1. Mouse ACE PicoKine ELISA Kit standard curve