Datasheet for ABIN411373

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 30-1261
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	156-10000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human ACE
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Saliva
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: L30-L1261
Specificity:	Expression system for standard: NSO Immunogen sequence: L30-L1261
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<5pg/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:	Background: Angiotensin-converting enzyme(ACE) is a zinc-containing dipeptidyl carboxypeptidase widely distributed in mammalian tissues and is thought to play a critical role in blood pressure regulation. The predicted protein is identical, from residue 37 to its C terminus, to the second half or C-terminal domain of the endothelial ACE sequence. The protein sequence inferred consists of a 732-residue preprotein including a 31-residue signal peptide. The mature polypeptide has a molecular weight of 80,073. Although ACE has been studied primarily in the context of its role in blood pressure regulation, this widely distributed enzyme has many other physiological functions. The ACE gene encodes two isozymes. The somatic isozyme is expressed in many tissues, including vascular endothelial cells, renal epithelial cells, and testicular Leydig cells, whereas the testicular or germinal angiotensin-converting enzyme is expressed only in sperm. The standard product used in this kit is recombinant human ACE, consisting of 30-1261 amino acids with the molecular mass of 120KDa. Synonyms: cDNA FLJ60635, highly similar to Angiotensin-converting enzyme, somatic isoform (EC 3.4.15.1) , Full Gene Name: angiotensin I converting enzyme
Gene ID:	1636
UniProt:	B4DKH4
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.

Application Details

Plate:	Pre-coated
Protocol:	human ACE ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for ACE has been precoated onto 96-well plates. Standards(NSO, L30-L1261) 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 human ACE amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 313pg/mL, 156pg/mL human 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 human cell culture supernatants, serum, plasma(heparin) or saliva to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each human ACE standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(ng/ml): 0.85, Standard deviation: 0.036, CV(%): 4.2 • Sample 2: n=16, Mean(ng/ml): 2.73, Standard deviation: 0.112, CV(%): 4.1 • Sample 3: n=16, Mean(ng/ml): 6.87, Standard deviation: 0.261, CV(%): 3.8, • Sample 1: n=24, Mean(ng/ml): 0.97, Standard deviation: 0.671, CV(%): 6.9 • Sample 2: n=24, Mean(ng/ml): 3.42, Standard deviation: 0.246, CV(%): 7.2 • Sample 3: n=24, Mean(ng/ml): 6.33, Standard deviation: 0.335, CV(%): 5.3
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

Publications

Product cited in:	Leira, Ameijeira, Domínguez, López-Arias, Ávila-Gómez, Pérez-Mato, Sobrino, Campos, DAiuto, Leira, Blanco: "Periodontal inflammation is related to increased serum calcitonin gene-related

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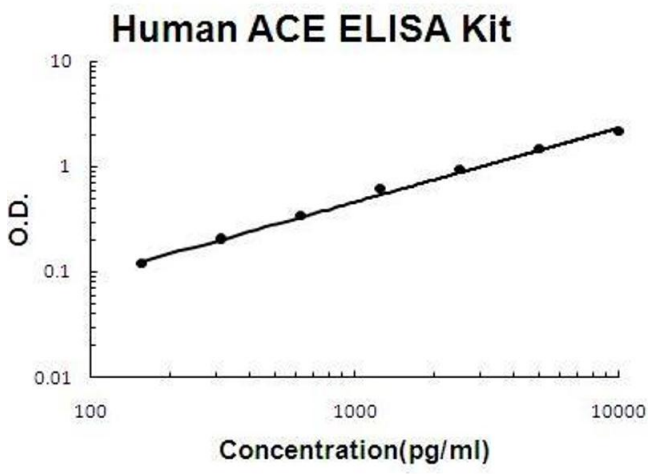
Pinto-Sanchez, Hall, Ghajar, Nardelli, Bolino, Lau, Martin, Cominetti, Welsh, Rieder, Traynor, Gregory, De Palma, Pigrau, Ford, Macri, Berger, Bergonzelli, Surette, Collins, Moayyedi, Bercik: " Probiotic Bifidobacterium longum NCC3001 Reduces Depression Scores and Alters Brain Activity: A Pilot Study in Patients With Irritable Bowel Syndrome." in: **Gastroenterology**, Vol. 153, Issue 2, pp. 448-459.e8, (2017) (PubMed).

Lei, Zhu, Zhang, Duan, Lei, Huang: "Transient Receptor Potential Vanilloid Subtype 1 Inhibits Inflammation and Apoptosis via the Release of Calcitonin Gene-Related Peptide in the Heart after Myocardial Infarction." in: **Cardiology**, Vol. 134, Issue 4, pp. 436-43, (2016) (PubMed).

Images



ELISA

Image 1. Human ACE PicoKine ELISA Kit standard curve