Product Name: ACE1 Rabbit Polyclonal Antibody
Catalog #: APRab06481
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight	165kDa

Antigen Information

Gene Name	ACE
Alternative Names	ACE; DCP; DCP1; Angiotensin-converting enzyme; ACE; Dipeptidyl carboxypeptidase I; Kininase II; CD antigen CD143
Gene ID	1636.0
SwissProt ID	P12821
Immunogen	The antiserum was produced against synthesized peptide derived from human ACE1. AA range:891-940

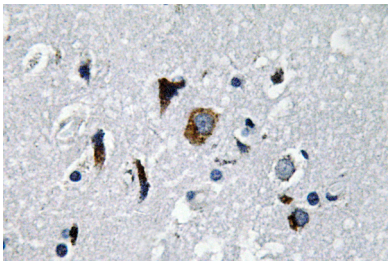
Background

This gene encodes an enzyme involved in catalyzing the conversion of angiotensin I into a physiologically active peptide angiotensin II. Angiotensin II is a potent vasopressor and aldosterone-stimulating peptide that controls blood pressure and fluid-electrolyte balance. This enzyme plays a key role in the renin-angiotensin system. Many studies have associated the presence or absence of a 287 bp Alu repeat element in this gene with the levels of circulating enzyme or cardiovascular pathophysiologies. Multiple alternatively spliced transcript variants encoding different isoforms have been identified, and two most abundant spliced variants encode the somatic form and the testicular form, respectively, that are equally active. [provided by RefSeq, May 2010],catalytic activity:Release of a C-terminal dipeptide, oligopeptide-|-Xaa-Yaa, when Xaa is not Pro, and Yaa is neither Asp nor Glu. Thus, conversion of angiotensin I to angiotensin II, with increase in vasoconstrictor activity, but no action on angiotensin II.,cofactor:Binds 2 zinc ions per subunit. The Testis-specific isoform only binds 1 zinc ion per subunit.,cofactor:Binds 3 chloride ions per subunit.,disease:Defects in ACE are a cause of renal tubular dysgenesis (RTD) [MIM:267430]. RTD is an 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).,disease:Genetic variations in ACE could influence susceptibility to diabetic nephropathy [MIM:612624]; also called susceptibility to microvascular complications of diabetes type 3 (MVCD3) or susceptibility to diabetic end-stage renal disease (ESRD). Diabetic nephropathy is a kidney disease and resultant kidney function impairment due to the long standing effects of diabetes on the microvasculature (glomerulus) of the kidney. Features include increased urine protein and declining kidney function.,disease:Genetic variations in ACE may be a cause of susceptibility to ischemic stroke [MIM:601367]; also known as cerebrovascular accident or cerebral infarction. 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.,enzyme regulation:Strongly activated by chloride. Specifically inhibited by lisinopril, captopril and enalaprilat.,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.,induction:Up-regulated in failing heart.,miscellaneous:Inhibitors of ACE are commonly used to treat hypertension and some types of renal and cardiac dysfunction.,miscellaneous:The glycosidase activity probably uses different active site residues than the metalloprotease activity.,online information:The Singapore human mutation and polymorphism database,PTM:Phosphorylated by CK2 on Ser-1299; which allows membrane retention.,similarity:Belongs to the peptidase M2 family.,tissue specificity:Ubiquitously expressed, with highest levels in lung, kidney, heart, gastrointestinal system and prostate. The testis-specific isoforn is expressed in spermatocytes, adult testis.,

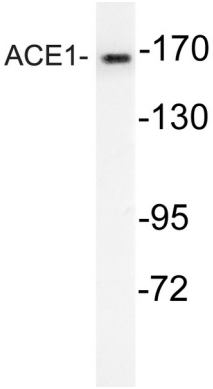
Research Area

Renin-angiotensin system;Hypertrophic cardiomyopathy (HCM);

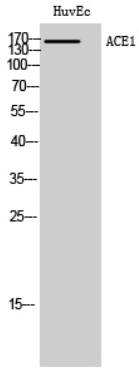
Image Data



Immunohistochemistry analysis of ACE1 antibody in paraffin-embedded human brain tissue.



Western blot analysis of lysates from mouse kidney, using ACE1 antibody.



Western Blot analysis of HuvEc cells using ACE1 Polyclonal Antibody diluted at 1：1000