



Rabbit Anti-ACE antibody

SL0439R

Product Name:	ACE
Chinese Name:	血管紧张素转换酶ACE1抗体
Alias:	Angiotensin Converting Enzyme 1; ACE; ACE-T; Angiotensin-converting enzyme isoform 1 precursor; Dipeptidyl carboxy peptidase 1; Kininase II; ACE-1; testis-specific isoform precursor. ACE 1; ACE T; ACE1; Angiotensin converting enzyme somatic isoform; Angiotensin converting enzyme testis specific isoform; Angiotensin I converting enzyme; Angiotensin I converting enzyme 1; Angiotensin I converting enzyme peptidyl dipeptidase A 1; Carboxycathepsin; CD 143; CD143; CD143 antigen; DCP 1; DCP; DCP1; Dipeptidyl carboxypeptidase 1; MVCD3; Peptidase P; Peptidyl dipeptidase A; Testicular ECA; ACE_HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human, Mouse, Rat, Dog, Pig, Cow, Sheep,
Applications:	WB=1:500-2000 ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 Flow-Cyt=3ug/Test ICC=1:100-500 IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	147kDa
Cellular localization:	The cell membrane Secretory protein
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human ACE1:801-900/1306<Extracellular>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:[PubMed](#)

Angiotensin Converting enzyme is 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. ACE 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. ACE exists in two forms, a 170KD somatic form and a 90KD germinal form. The somatic form is expressed by endothelial cells (especially those of lung capillaries and arterioles), epithelial cells (especially in proximal renal tubules and small intestine), by some neuronal cells and variably by some macrophages and T lymphocytes. The germinal form is expressed by spermatozoa.

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.

Subcellular Location:

Angiotensin-converting enzyme, soluble form: Secreted.
Cell membrane; Single-pass type I membrane protein.

Tissue Specificity:

Ubiquitously expressed, with highest levels in lung, kidney, heart, gastrointestinal system and prostate. Isoform Testis-specific is expressed in spermatocytes and adult testis.

Post-translational modifications:

Phosphorylated by CK2 on Ser-1299; which allows membrane retention.

DISEASE:

Genetic variations in ACE may be a cause of susceptibility to ischemic stroke (ISCHSTR) [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.

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).

Genetic variations in ACE are associated with susceptibility to microvascular complications of diabetes type 3 (MVCD3) [MIM:612624]. These are pathological

Product Detail:

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.

Similarity:

Belongs to the peptidase M2 family.

SWISS:

P12821

Gene ID:

1636

Database links:

[Entrez Gene: 1636](#)Human

[Entrez Gene: 11421](#)Mouse

[Omim: 106180](#)Human

[SwissProt: P12821](#)Human

[SwissProt: P09470](#)Mouse

[Unigene: 298469](#)Human

[Unigene: 754](#)Mouse

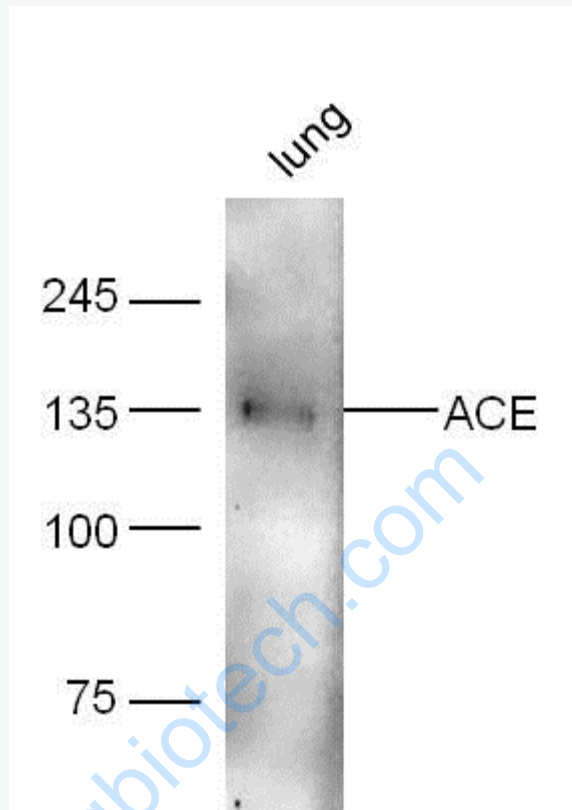
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Synthesis and Degradation (Synthesis and Degradation)

ACE的主要功能是转化血管紧张素 I 为血管紧张素 II，后者有升高血压的作用。大多数结节病活动期ACE活性升高。

Picture:



Sample:

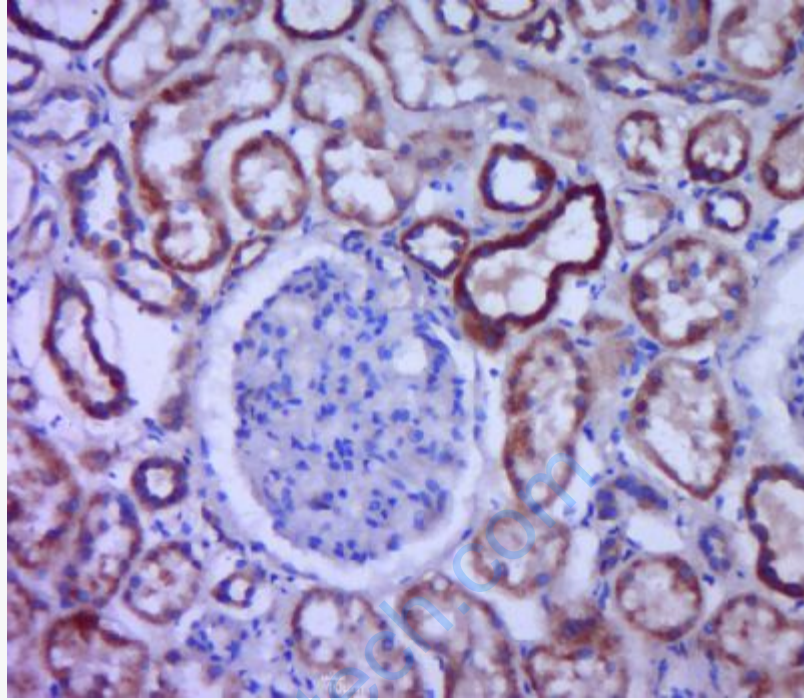
Lung (Mouse) Lysate at 40 ug

Primary: Anti-ACE (SL0439R) at 1/300 dilution

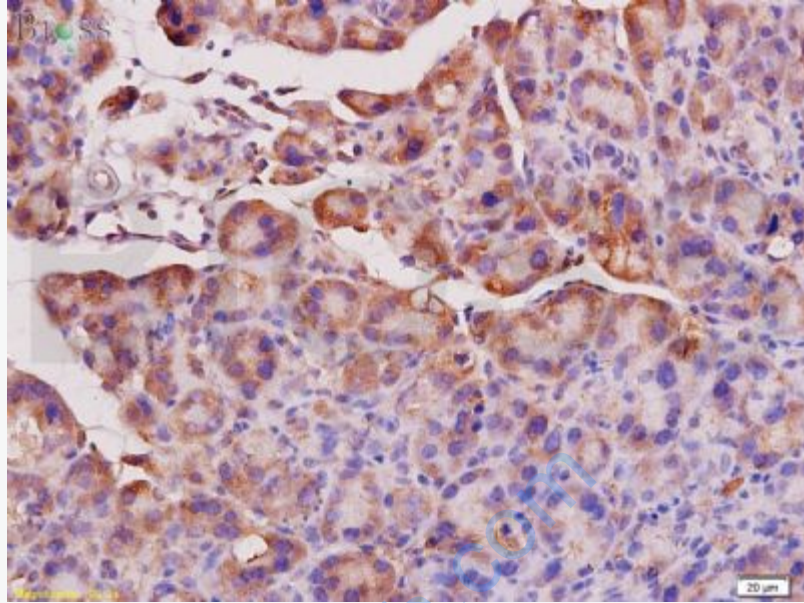
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 147 kD

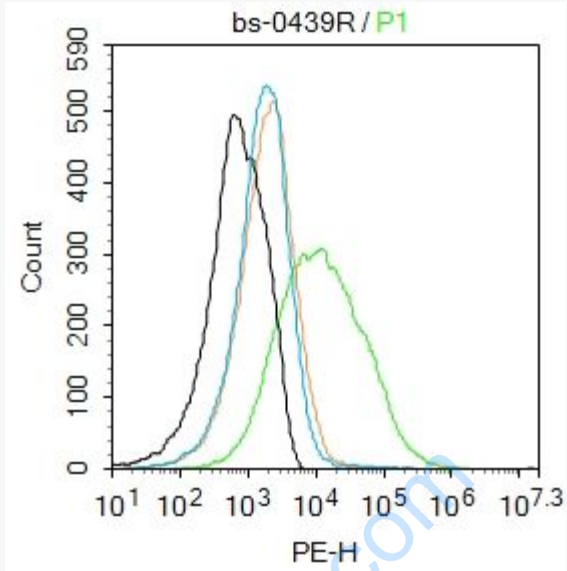
Observed band size: 135 kD



Paraformaldehyde-fixed, paraffin embedded (human kidney tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ACE) Polyclonal Antibody, Unconjugated (SL0439R) at 1:400 overnight at 4°C, followed by a conjugated secondary (sp-0023) for 20 minutes and DAB staining.



Tissue/cell: rat pancreas tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block
endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer
(normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-ACE1 Polyclonal Antibody, Unconjugated(SL0439R) 1:200,
overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and
DAB(C-0010) staining



Blank control: Mouse kidney.

Primary Antibody (green line): Rabbit Anti-ACE antibody (SL0439R)

Dilution: $3\mu\text{g} / 10^6$ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-PE

Dilution: $1\mu\text{g} / \text{test}$.

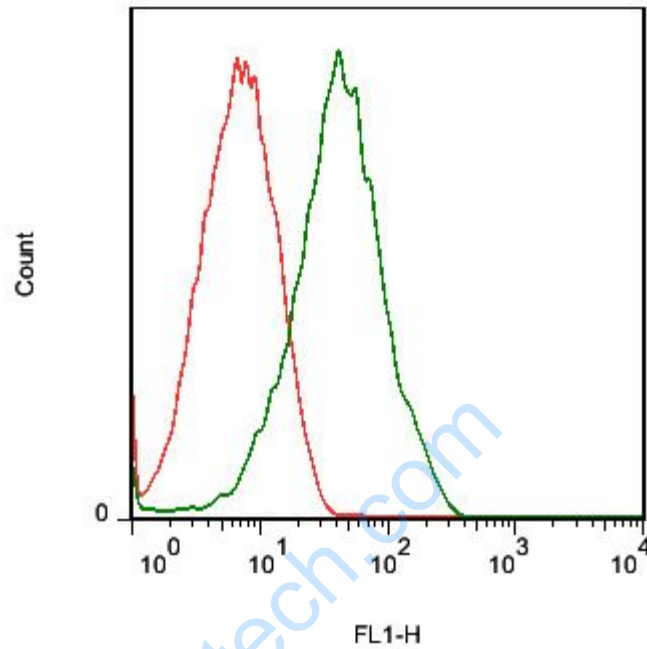
Protocol

The cells were incubated in 5%BSA to block non-specific protein-protein

interactions for 30 min at room temperature .Cells stained with Primary Antibody

for 30 min at room temperature. The secondary antibody used for 40 min at room

temperature. Acquisition of 20,000 events was performed.



Cell: Mouse Kidney (4% Paraformaldehyde fixed for 10 minutes).

Concentration: 1:30.

Incubation: 40 minutes.

Host/Blank: Mouse Kidney Cells.

Flow cytometric analysis of Rabbit Anti-ACE antibody (SL0439R)(green) compared with control in the absence of primary antibody (red) followed by Goat Anti-rabbit IgG/FITC antibody (SL0439R) secondary antibody .