

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; Carboxypeptidase; CD 143; CD143; CD143 antigen; DCP 1; DCP; DCP1; Dipeptidyl carboxypeptidase 1; MVCD3; Peptidase P; Peptidyl dipeptidase A; Testicular ECA; ACE_HUMAN.

Research Area Tumour Cardiovascular Cell biology immunology Stem cells Cell Surface Molecule

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat, (predicted: Dog, Pig, Cow, Sheep,)

Applications WB=1:500-2000, ELISA=1:5000-10000 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 147kDa

Cellular localization The cell membrane Secretory protein

Form 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

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage	Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed This gene encodes an enzyme involved in blood pressure regulation and electrolyte balance. It catalyzes 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 angiotensin converting enzyme (ACE) also inactivates the vasodilator protein, bradykinin. Accordingly, the encoded enzyme increases blood pressure and is a drug target of ACE inhibitors, which are often prescribed to reduce blood pressure. This enzyme additionally plays a role in fertility through its ability to cleave and release GPI-anchored membrane proteins in spermatozoa. Many studies have associated the presence or absence of a 287 bp Alu repeat element in this gene with the levels of circulating enzyme. This polymorphism, as well as mutations in this gene, have been implicated in a wide variety of diseases including cardiovascular pathophysiologies, psoriasis, renal disease, stroke, and Alzheimer's disease. Regulation of the homologous ACE2 gene may be involved in progression of disease caused by several human coronaviruses, including SARS-CoV and SARS-CoV-2. Alternative splicing results in multiple transcript variants encoding both somatic (sACE) and male-specific testicular (tACE) isoforms. [provided by RefSeq, Sep 2020]
Product Detail	<p>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.</p> <p>Subcellular Location: Angiotensin-converting enzyme, soluble form: Secreted. Cell membrane; Single-pass type I membrane protein.</p> <p>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.</p> <p>Post-translational modifications: Phosphorylated by CK2 on Ser-1299; which allows membrane retention.</p> <p>DISEASE: Genetic variations in ACE may be a cause of susceptibility to ischemic stroke</p>

(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 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

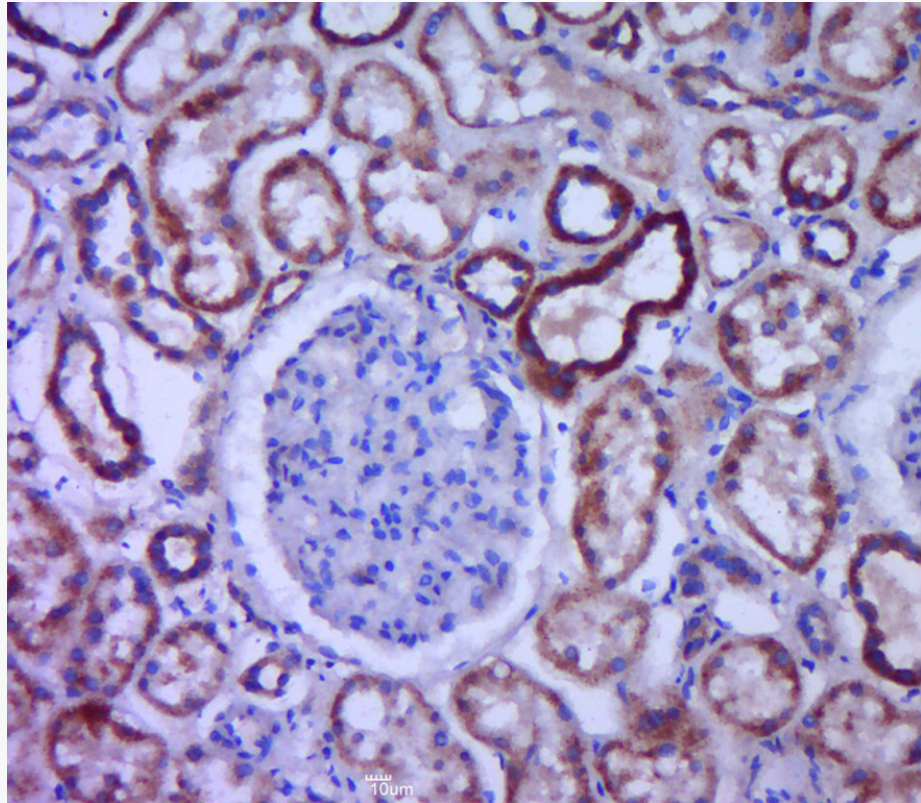
[Unigene: 298469](#) Human

[Unigene: 754](#) Mouse

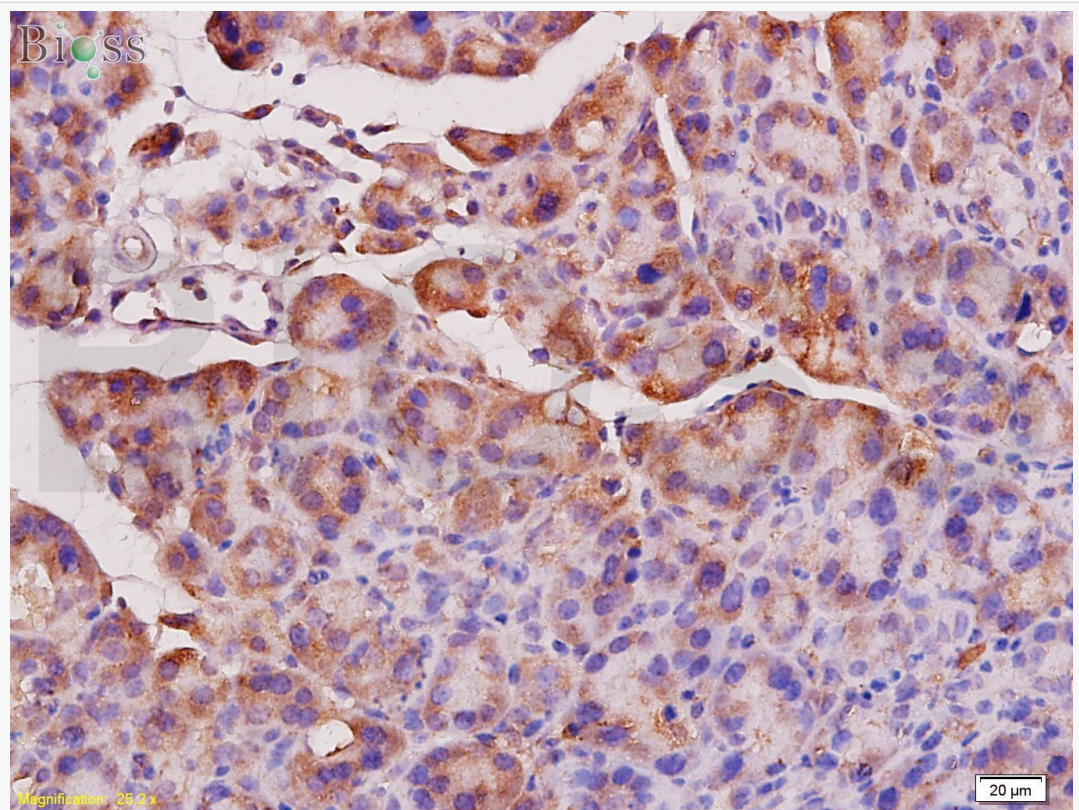
Synthesis and Degradation (Synthesis and Degradation) ACE 的主要功能是转化血管紧张素I为血管紧张素II，后者有升高血压的作用。

大多数结节病活动期 ACE 活性升高.

**Product
Picture**



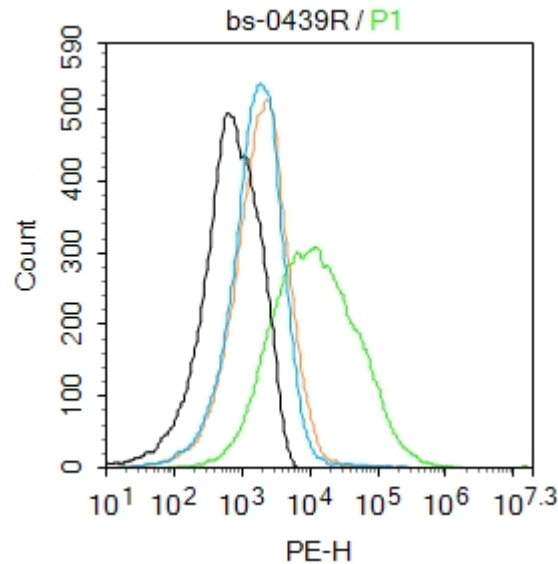
Paraformaldehyde-fixed, paraffin embedded (human kidney tissue); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ACE) Polyclonal 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 (1M, 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 .

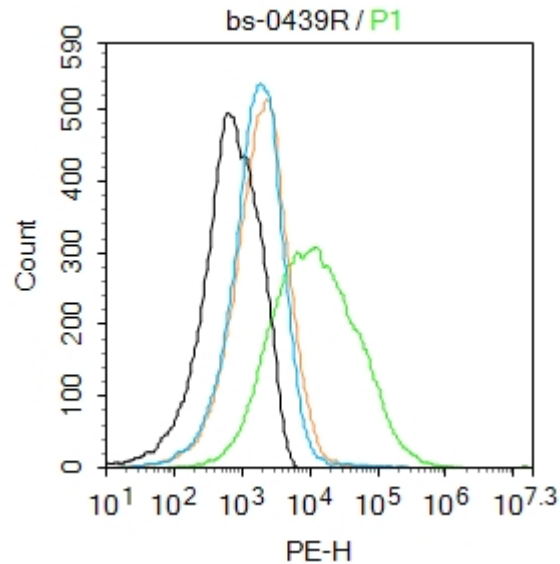
Secondary Antibody : Goat anti-rabbit IgG-PE

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.



Blank control: Mouse kidney.

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

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

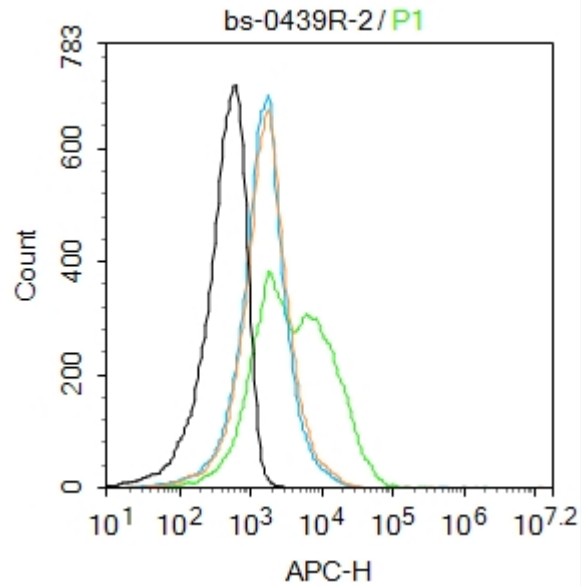
Isotype Control Antibody (orange line): Rabbit IgG .

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.



Blank control:Mouse kidney.

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

Dilution: 2 μ g /10⁶ cells;

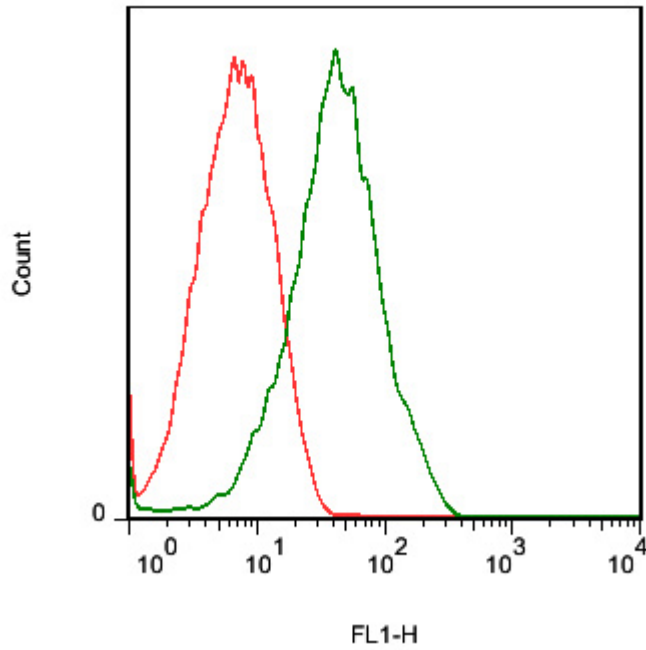
Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-APC

Dilution: 2 μ g /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 (SL0295G-FITC) secondary antibody .