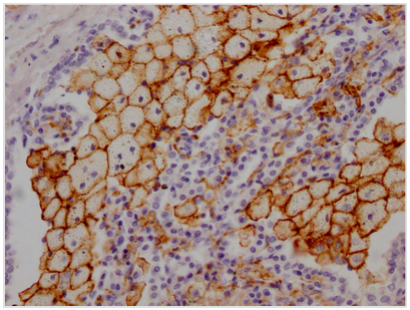
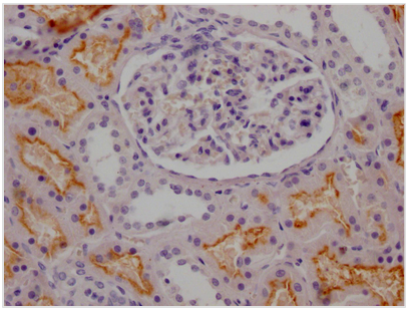
ACE Recombinant Monoclonal Antibody

Product Code	CSB-RA268157A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P12821
Immunogen	A synthesized peptide derived from human ACE1
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Cardiovascular; Cell biology; Metabolism; Signal transduction; Stem cells
Gene Names	ACE
Clone No.	2H8

Image



IHC image of CSB-RA268157A0HU diluted at 1:100 and staining in paraffin-embedded human lung tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA268157A0HU diluted at 1:100 and staining in paraffin-embedded human kidney tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The production of the ACE recombinant antibody begins with the synthesis of the ACE antibody-encoding gene. The process of obtaining the ACE antibody gene involves immunizing animals with a synthesized peptide derived from human ACE, followed by the isolation of B cells and fusion with myeloma cells to generate hybridomas. The resulting hybridomas are screened for ACE antibody production and the gene sequence of the variable light and heavy domains are determined, which is then cloned into a vector. The vector containing the ACE monoclonal antibody gene is then transfected into cells for cultivation, and the resulting ACE recombinant monoclonal antibody is purified through affinity chromatography from the cell culture supernatant. The purified ACE recombinant monoclonal antibody is specifically able to react with only human ACE samples and has been successfully tested in ELISA and IHC applications.

The ACE protein is an important enzyme involved in the regulation of blood pressure and electrolyte balance. In cells, it functions by converting angiotensin I to angiotensin II, which is a potent vasoconstrictor and increases blood pressure. The ACE protein also breaks down bradykinin, a peptide that causes vasodilation and reduces blood pressure, thereby contributing to the regulation of blood pressure. Additionally, the ACE protein is involved in the inactivation of other vasoactive peptides and has been implicated in a variety of physiological processes, such as inflammation, oxidative stress, and cell growth.