


Product datasheet

Anti-Angiotensin I antibody ab8051

Overview

Product name	Anti-Angiotensin I antibody
Description	Rabbit polyclonal to Angiotensin I
Specificity	Specificity of the antisera is confirmed by its ability to bind and precipitate labeled angiotensin I and to be adsorbed by angiotensin. Native angiotensin competes with such binding, while human whole plasma or plasma proteins do not. The antiserum also reacts with angiotensin II (Reactivity in competitive ELISA was shown : 80% to Angiotensin II; 100% to Angiotensin I)
Tested applications	Suitable for: ELISA Unsuitable for: IHC
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Dog 
Immunogen	Synthetic peptide: DRVYIHPFHL conjugated to BSA by a CDI linker, corresponding to N terminal amino acids 34-43 of Human Angiotensin I. Run BLAST with Run BLAST with
General notes	The enzyme renin cleaves angiotensinogen to produce an inactive prohormone, angiotensin I; the latter is transformed to the active molecule angiotensin II by another enzyme, angiotensin-converting enzyme

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Purity	Whole antiserum
Purification notes	Pooled antisera are passed over DEAE-cellulose to produce IgG-enriched fraction, which is further subjected to absorption with immobilized human albumin and immunoglobuline fractions in order to remove non-specific antibodies.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab8051** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
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ELISA

Application notes

ELISA: Use at an assay dependent dilution.

Is unsuitable for IHC.

Not yet tested in other applications.

A starting dilution of 1/100 is recommended. Please note that optimal dilutions/concentrations should be determined by the end user.

Target

Function

Essential component of the renin-angiotensin system (RAS), a potent regulator of blood pressure, body fluid and electrolyte homeostasis. In response to lowered blood pressure, the enzyme renin cleaves angiotensinogen to produce angiotensin-1 (angiotensin 1-10). Angiotensin-1 is a substrate of ACE (angiotensin converting enzyme) that removes a dipeptide to yield the physiologically active peptide angiotensin-2 (angiotensin 1-8). Angiotensin-1 and angiotensin-2 can be further processed to generate angiotensin-3 (angiotensin 2-8), angiotensin-4 (angiotensin 3-8). Angiotensin 1-7 is cleaved from angiotensin-2 by ACE2 or from angiotensin-1 by MME (nepilysin). Angiotensin 1-9 is cleaved from angiotensin-1 by ACE2. Angiotensin-2 acts directly on vascular smooth muscle as a potent vasoconstrictor, affects cardiac contractility and heart rate through its action on the sympathetic nervous system, and alters renal sodium and water absorption through its ability to stimulate the zona glomerulosa cells of the adrenal cortex to synthesize and secrete aldosterone. Angiotensin-3 stimulates aldosterone release. Angiotensin 1-7 is a ligand for the G-protein coupled receptor MAS1 (By similarity). Has vasodilator and antidiuretic effects (By similarity). Has an antithrombotic effect that involves MAS1-mediated release of nitric oxide from platelets.

Tissue specificity

Expressed by the liver and secreted in plasma.

Involvement in disease

Genetic variations in AGT are a cause of susceptibility to essential hypertension (EHT) [MIM:145500]. Essential hypertension is a condition in which blood pressure is consistently higher than normal with no identifiable cause. Defects in AGT 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).

Sequence similarities

Belongs to the serpin family.

Post-translational modifications

Beta-decarboxylation of Asp-34 in angiotensin-2, by mononuclear leukocytes produces alanine. The resulting peptide form, angiotensin-A, has the same affinity for the AT1 receptor as angiotensin-2, but a higher affinity for the AT2 receptor.

Cellular localization

Secreted.

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