Datasheet for ABIN2181691

Renin Protein (REN) (AA 24-406) (His tag)

1 Image

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Overview

Quantity:	100 µg
Target:	Renin (REN)
Protein Characteristics:	AA 24-406
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Renin protein is labelled with His tag.

Product Details

Sequence:	AA 24-406
Characteristics:	This protein carries a polyhistidine tag at the C-terminus. The protein has a calculated MW of 43.2 kDa. The protein migrates as 45 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Purity:	>95 % as determined by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	Renin (REN)
Alternative Name:	RENIN (REN Products)

Target Details

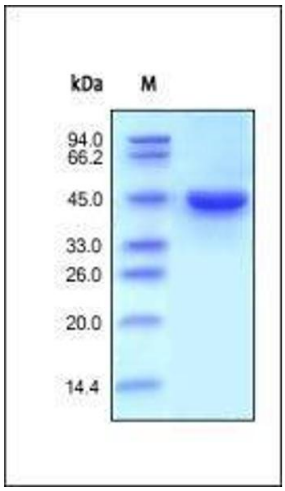
Background:	Renin is also known as REN and angiotensinogenase, is a circulating enzyme that participates in the body's renin-angiotensin system (RAS), and plays an essential role in the elevation of arterial blood pressure and increased sodium retention by the kidney. Renin activates the renin-angiotensin system by cleaving angiotensinogen, produced by the liver, to yield angiotensin I, which is further converted into angiotensin II by ACE, the angiotensin-converting enzyme primarily within the capillaries of the lungs. Renin is secreted from kidney cells, which are activated via signaling from the macula densa, which responds to the rate of fluid flow through the distal tubule, by decreases in renal perfusion pressure (through stretch receptors in the vascular wall), and by sympathetic nervous stimulation, mainly through beta-1 receptor activation. Renin can bind to ATP6AP2, which results in a fourfold increase in the conversion of angiotensinogen to angiotensin I over that shown by soluble renin. In addition, renin binding results in phosphorylation of serine and tyrosine residues of ATP6AP2. The level of renin mRNA appears to be modulated by the binding of HADHB, HuR and CP1 to a regulatory region in the 3' UTR. An over-active renin-angiotension system leads to vasoconstriction and retention of sodium and water. These effects lead to hypertension. Therefore, renin inhibitors can be used for the treatment of hypertension.
Molecular Weight:	43.1 kDa
Pathways:	ACE Inhibitor Pathway, Peptide Hormone Metabolism, Regulation of Systemic Arterial Blood Pressure by Hormones, Feeding Behaviour

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	PBS, pH 7.4
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C
Storage Comment:	No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C-8 °C), After reconstitution under sterile conditions for 1 month (4 °C-8 °C) or 3 months (-20 °C to -70 °C).



SDS-PAGE

Image 1. Human RENIN, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.