

Human Renin Protein (His Tag)

Catalog Number: 10969-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

FLJ10761; HNFJ2; REN; D19352; Ren; Ren-1; Ren-A; Ren1; Ren1c; Ren1d; Rn-1; Rnr

Protein Construction:

A DNA sequence encoding the human Renin (NP_000528.1) precursor (Met 1-Arg 406) was expressed with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized human RENIN-His (Cat: 10969-H08H) at 10 µg/ml (100 µl/well) can bind biotinylated human AGT-His (Cat: 10994-H08H) with a linear range of 0.156-5.0 µg/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Leu 24

Molecular Mass:

The secreted recombinant human Renin is a monomeric protein after cleavage of the signal peptide. The pro form consists of 394 amino acids and predicts a molecular mass of 43.7 kDa. In SDS-PAGE under reducing conditions, it migrates with the apparent molecular mass of 50 kDa due to glycosylation.

Formulation:

Lyophilized from sterile 25mM MES, 150mM NaCl, pH6.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

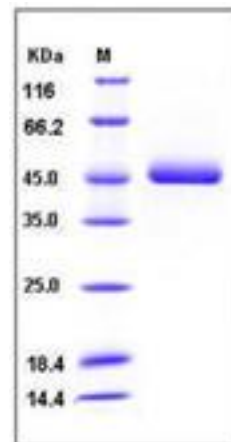
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Mouse Renin-1, also known as Ren-1, Angiotensinogenase and Kidney renin, is a member of the peptidase A1 family. Renin-1 is synthesized by the juxtaglomerular cells of the kidney in response to decreased blood pressure and sodium concentration. androgen and thyroid hormones influence levels of Renin-1 in mouse submandibular gland (SMG) primarily by regulating the amount of Renin-1 mRNA available for translation. Renin-1 is a highly specific endopeptidase, whose only known function is to generate angiotensin I from angiotensinogen in the plasma, initiating a cascade of reactions that produce an elevation of blood pressure and increased sodium retention by the kidney. It is expressed at relatively low levels in mouse SMG and kidney. Ren-2 is expressed at high levels in the mouse SMG and at very low levels, if at all, in the kidney. Ren-1 and Ren-2 are closely linked on mouse chromosome 1, show extensive homology in coding and noncoding regions and provide a model for studying the regulation of gene expression.

References

1. McKeon F.D., *et al.*, (1986), Homologies in both primary and secondary structure between nuclear envelope and intermediate filament proteins. *Nature* 319:463-468.
2. Fisher D.Z., *et al.*, (1986), cDNA sequencing of nuclear lamins A and C reveals primary and secondary structural homology to intermediate filament proteins. *Proc. Natl. Acad. Sci. U.S.A.* 83:6450-6454.
3. Sylvius N., *et al.*, (2005), In vivo and in vitro examination of the functional significances of novel lamin gene mutations in heart failure patients. *J. Med. Genet.* 42:639-647.

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