

# Recombinant Mouse REN1/Renin-1 Protein (His Tag)

Catalog Number:PKSM040760



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

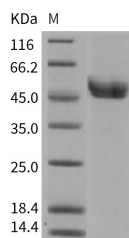
## Description

<b>Synonyms</b>	Renin-1;Angiotensinogenase;Kidney renin;Ren1;Ren;Ren-1;Angiotensin-forming enzyme;Ren-A;Ren1c;Ren1d;Rn-1;Rnr
<b>Species</b>	Mouse
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Arg 402
<b>Accession</b>	NP_112469.1
<b>Calculated Molecular Weight</b>	43.2 kDa
<b>Observed molecular weight</b>	48-55 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Measured by its ability to cleave the fluorogenic peptide substrate 5FAM/QXL™ 520 (PetiPeterdi, J. et al., 2009, Physiology 24:88.). The specific activity is > 20 pmoles/min/μg. 2. Immobilized mouse REN1-His at 10ug/ml (100 μl/well) can bind biotinylated human AGT-His with a linear range of 31. 25-250 ng/ml.

## Properties

<b>Purity</b>	> 97 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per μg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 97 % as determined by reducing SDS-PAGE.

## Background

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

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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.

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