



# Recombinant Protein Technical Manual

**Recombinant Mouse REN1/Renin Protein (His Tag)(Active)**  
RPES3205

## Product Data:

**Product SKU:** RPES3205

**Size:** 20µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** NP\_112469.1

## Protein Information:

**Molecular Mass:** 43.2 kDa

**AP Molecular Mass:** 48-55 kDa

**Tag:** C-His

**Bio-activity:** 1. Measured by its ability to cleave the fluorogenic peptide substrate 5-FAM/QXL™ 520 (Peti-Peterdi, 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 biotinyla

**Purity:** > 97 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** 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.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** Renin; Angiotensinogenase; Kidney renin; Ren1; Ren; Ren;Angiotensin-forming enzyme;Ren-A;Ren1c;Ren1d;Rn;Rnr

## Immunogen Information:

**Sequence:** Met 1-Arg 402

## Background:

Renin, also known as Ren, Angiotensinogenase and Kidney renin, is a member of the peptidase A1 family. Renin 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 in mouse submandibular gland (SMG) primarily by regulating the amount of Renin mRNA available for translation. Renin 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 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.