



# Recombinant Protein Technical Manual

## Recombinant Human Renin Protein (His Tag)(Active)

RPES4775

### Product Data:

**Product SKU:** RPES4775

**Size:** 20µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_000528.1

### Protein Information:

**Molecular Mass:** 43.7 kDa

**AP Molecular Mass:** 50 kDa

**Tag:** C-His

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

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg 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 25mM MES, 150mM NaCl, pH6.5

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

**Application:** Functional ELISA

**Synonyms:** Renin; Angiotensinogenase; REN; Angiotensin-forming enzyme

## Immunogen Information:

**Sequence:** Met 1-Arg 406

## 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.