

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                                                                                                                                                                 |
| <b>Specificity</b>                                                                                                                                                                                      | Detects both pro and mature forms of human Renin in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse Renin-1 is observed and less than 5% cross-reactivity with recombinant rat Renin-1 i |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Sheep IgG                                                                                                                                                                                                                                  |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                                                                                                                                                                                             |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant human Renin<br>Leu24-Arg406<br>Accession # P60016                                                                                                                                                     |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                       |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                                                                                                                                                          |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                                                                                                                                                                       |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Neutralization</b>       | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunoprecipitation</b>  | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Human Renin is a member of the aspartyl proteinase family produced largely in part by the juxtaglomerular cells in the kidney (1). Renin differs from the other members of this class by having a pH optimum near the neutral pH region with native substrates instead of a pH 2.0 to 3.4 range (2). This more neutral pH optimum allows it to be functional in the plasma. Renin also has a very high selectivity for substrates due to a long peptide recognition on either side of the peptide bond undergoing cleavage. An octapeptide substrate was the minimum length to be cleaved by Renin. Renin plays a crucial role in the regulation of blood pressure and salt balance through the cleavage of angiotensinogen, which is the only known physiological substrate of Renin. Renin releases the decapeptide angiotensin I, which in turn is further converted to vasoactive hormone angiotensin II by angiotensin converting enzyme (ACE). Renin is produced as prorenin with 43 pro residues at the N-terminal of mature Renin. The inactive prorenin becomes activated proteolytically by trypsin, cathepsin B, or other proteinases.

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