

Prorenin/Renin Assay Kit

Rat Prorenin/Renin Total Antigen ELISA Kit

CATALOG #
AAA71827

PRODUCT SYNONYMS

Prorenin/Renin; Rat Prorenin/Renin Total Antigen ELISA Kit; Total Rat Prorenin/Renin ELISA; Prorenin/Renin assay kit

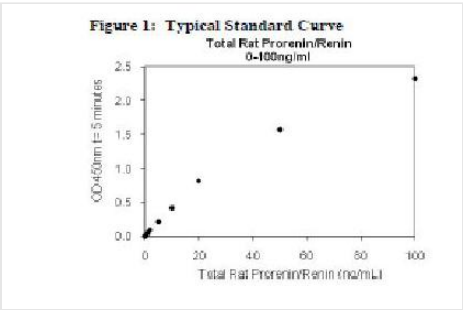
PRODUCT SPECIFICATIONS

Procedural Notes	1. Use aseptic technique when opening and dispensing reagents. 2. This kit is designed to work properly as provided and instructed. Additions, deletions, or substitutions to the procedure or reagents are not recommended, as they may be detrimental to the assay. 3. Exercise universal precautions during the performance or handling of this kit or any component contained therein.																																												
Sample Collection and Preparation	Typical rat prorenin levels range from 0 to 400 ng/mL. The assay range for this ELISA is 0.1 to 100 ng/mL. Samples with prorenin levels above 100 ng/mL should be diluted in Blocking Buffer and retested.																																												
Reagent Preparation	The following solutions should be prepared fresh before starting the assay. 1. TBS Buffer: 0.1 M TRIS, 0.15 M NaCl, pH 7.4 2. 3% BSA Blocking Buffer: 3% BSA in TBS Buffer. 3. 10x Wash Buffer: Dilute the 50 mL of concentrate to 1x with 450 mL of DI water prior to use. 4. Standard: Reconstitute with 1.0 mL of 3% BSA Blocking Buffer and vortex gently to mix. Prepare according to included Standard Dilution Table immediately prior to use. 5. Primary Antibody: Reconstitute with 10 mL of 3% BSA Blocking Buffer and vortex gently to mix. Prepare immediately prior to use. 6. Avidin HRP: Dilute with 10 mL of 3% BSA Blocking Buffer and vortex gently to mix. Prepare immediately prior to use.																																												
Standard Preparation	Reconstitute the Standard as directed on the vial to give a 1000 ng/mL Standard Stock Solution. Do not prepare the standards until you are ready to apply them to the plate. Table 1: Preparation of Standard Curve <table> <tr> <td>Standard</td><td></td></tr> <tr> <td>Prorenin</td><td></td></tr> <tr> <td>Concentration (ng/mL)</td><td></td></tr> <tr> <td>Blocking Buffer</td><td></td></tr> <tr> <td>(μL)</td><td></td></tr> <tr> <td>Transfer Volume</td><td></td></tr> <tr> <td>(μL)</td><td></td></tr> <tr> <td>Transfer</td><td></td></tr> <tr> <td>Source</td><td></td></tr> <tr> <td>Final</td><td></td></tr> <tr> <td>Volume (μL)</td><td></td></tr> <tr> <td>S10</td><td>100 900 100 Stock 750</td></tr> <tr> <td>S9</td><td>50 250 250 S10 300</td></tr> <tr> <td>S8</td><td>20 300 200 S9 250</td></tr> <tr> <td>S7</td><td>10 250 250 S8 250</td></tr> <tr> <td>S6</td><td>5 250 250 S7 300</td></tr> <tr> <td>S5</td><td>2 300 200 S6 250</td></tr> <tr> <td>S4</td><td>1 250 250 S5 250</td></tr> <tr> <td>S3</td><td>0.5 250 250 S4 300</td></tr> <tr> <td>S2</td><td>0.2 300 200 S3 250</td></tr> <tr> <td>S1</td><td>0.1 250 250 S2 500</td></tr> <tr> <td>S0</td><td>0 500 --- --- 500</td></tr> </table>	Standard		Prorenin		Concentration (ng/mL)		Blocking Buffer		(μL)		Transfer Volume		(μL)		Transfer		Source		Final		Volume (μL)		S10	100 900 100 Stock 750	S9	50 250 250 S10 300	S8	20 300 200 S9 250	S7	10 250 250 S8 250	S6	5 250 250 S7 300	S5	2 300 200 S6 250	S4	1 250 250 S5 250	S3	0.5 250 250 S4 300	S2	0.2 300 200 S3 250	S1	0.1 250 250 S2 500	S0	0 500 --- --- 500
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Preparation and Storage

1. Store this kit and its components at 4 degree C until use.
2. Reconstituted standards and primary may be stored at -70C for later use. DO NOT freeze/thaw the Standards and Primary Antibody more than once.

IMAGES



Scheme I: Sample Plate Layout

	1	2	3	4	5	6	7	8	9	10	11	12
A	S ₁₀	S ₉	S ₈	S ₇	S ₆	S ₅	S ₄	S ₃	S ₂	S ₁	S ₀	U ₁
B	S ₁₀	S ₉	S ₈	S ₇	S ₆	S ₅	S ₄	S ₃	S ₂	S ₁	S ₀	U ₁
C	U ₂	U ₃	U ₄	U ₅	U ₆	U ₇	U ₈	U ₉	U ₁₀	U ₁₁	U ₁₂	U ₁₃
D	U ₂	U ₃	U ₄	U ₅	U ₆	U ₇	U ₈	U ₉	U ₁₀	U ₁₁	U ₁₂	U ₁₃
E	U ₁₄	U ₁₅	U ₁₆	U ₁₇	U ₁₈	U ₁₉	U ₂₀	U ₂₁	U ₂₂	U ₂₃	U ₂₄	U ₂₅
F	U ₁₄	U ₁₅	U ₁₆	U ₁₇	U ₁₈	U ₁₉	U ₂₀	U ₂₁	U ₂₂	U ₂₃	U ₂₄	U ₂₅
G	U ₂₆	U ₂₇	U ₂₈	U ₂₉	U ₃₀	U ₃₁	U ₃₂	U ₃₃	U ₃₄	U ₃₅	U ₃₆	U ₃₇
H	U ₂₆	U ₂₇	U ₂₈	U ₂₉	U ₃₀	U ₃₁	U ₃₂	U ₃₃	U ₃₄	U ₃₅	U ₃₆	U ₃₇

Application Data

Application Data

ADDITIONAL INFORMATION

Related Product Information for Prorenin/Renin assay kit

Introduction: Prorenin is a glycosylated aspartic protease that consists of 2 homologous lobes and is the precursor of renin. Renin activates the renin-angiotensin system by cleaving angiotensinogen, produced by the liver, to yield angiotensin I, which is further converted into angiotensin II by ACE, the angiotensin-converting enzyme primarily within the capillaries of the lungs. It has been reported that the levels of circulating prorenin (but not renin) are increased in diabetic subjects (1).

Principle of assay: This ELISA uses a capture antibody coated to the 96-well plate to bind Rat Prorenin and Renin. A detection antibody conjugated to biotin is then applied. After washing, avidin conjugated to horseradish peroxidase (HRP) is applied. TMB substrate is added for color development which is proportional to the total concentration of prorenin and rennin in the sample. Sample concentrations can be determined by comparing OD values to the standard curve.

References

1. Luetscher, J.A., et. al.; (1985) N. Engl. J. Med. 312:1412-1417

2. Ioannou, P., et. al.; (1991) Can. J. Physiol. Pharmac. 69(9):1331-1340

3. Danser, A.H., et. al.; (1988) J. Hypertens. 16:853-862

4. Yokota, H., et. al.; (2005) Br. J. Ophthalmol. 89:871-873

5. Schmieder, R.E.; (2007) J. Hypertens. 25:1323-1326

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.