ARG80882
Human Plasma Renin Activity (PRA) ELISA Kit

Package: 96 wells
Store at: 4°C

Summary

Product Description	ARG80882 Human Plasma Renin Activity (PRA) ELISA Kit is an enzyme immunoassay kit for the quantification of Plasma Renin Activity (PRA) in human plasma (EDTA).
Tested Reactivity	Hu
Tested Application	ELISA
Target Name	Plasma Renin Activity
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm
Sensitivity	0.14 ng/ml
Sample Type	Plasma (EDTA).
Standard Range	0.2 - 60 ng/ml
Sample Volume	50 µl
Alternate Names	EC 3.4.23.15; Angiotensinogenase; HNFJ2; Renin

Application Instructions

Assay Time	1 h, 30, 10-15 min (RT/shaker)

Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 5972 Human Swiss-port # P00797 Human
Gene Symbol	REN
Gene Full Name	renin
Background	This kit measures PRA and the results are expressed in terms of mass of angiotensin-I (Ang-I) generated per volume of human plasma in unit time (ng/mL.h). Measurement of PRA is important for the clinical evaluation of hypertensive patients. In particular, determination of plasma renin activity can help in the diagnosis of primary hyperaldosteronism (5-13% of hypertensive cases) and assist in the therapy and management of other forms of hypertension.

PRA, in contrast to the determination of renin concentration, is a more accurate indicator of primary hyperaldosteronism (PHA), because of several reasons:

1. PRA is the expression of the rate of Ang-I formation through the enzymatic action of renin on its substrate, angiotensinogen, therefore PRA depends not only on renin concentration but also on the concentration of angiotensinogen which is ignored in the renin concentration assay;
2. Plasma renin concentration assay does not ensure sensitivity in low renin states, while the sensitivity of the PRA assay can be enhanced by increasing the incubation time during the generation step (Sealey et al., 2005),
3. When an inhibitor is bound to the renin active site PRA is inhibited, whereas the presence of the inhibitor does not affect the recognition of renin by currently available immunoassays, therefore total renin concentration does not always correlate with plasma renin activity (Campbell et al., 2009).

Renin liberates angiotensin-I from angiotensinogen. Angiotensin-I is transformed to angiotensin-II largely in pulmonary circulation by angiotensin converting enzyme (ACE). Angiotensin-II raises blood pressure by direct arteriolar vasoconstriction, promoting sodium retension, and stimulating the secretion of aldosterone from the adrenal cortex. Aldosterone also exerts an effect to restore sodium balance and lift arterial pressure. Accurate measurement of the concentration of circulating angiotensin-II is challenging because of its instability in blood samples. Aldosterone concentration can be easily determined using the immunoassay kit.

Highlight

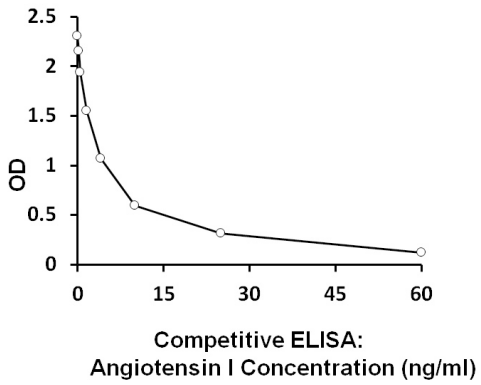
Related products:

New ELISA data calculation tool:
Simplify the ELISA analysis by GainData

Research Area

Cell Biology and Cellular Response kit; Metabolism kit; Signaling Transduction kit

Images



ARG80882 Human Plasma Renin Activity (PRA) ELISA Kit standard curve example image

The representative standard curve of ARG80882 Human Plasma Renin Activity (PRA) ELISA Kit. The standard curve is for demonstration only and cannot be used in place of data generations at the time of assay. The standard curve should be generated each time the assay is performed.