Urinary Creatinine Assay Kit

Catalog Number: **UCR1**
Store at 4°C.
FOR RESEARCH USE ONLY

Introduction: This is an easy one step creatinine assay with results obtained in less than one hour. Only 10µl or less of sample is required to perform the assay. Creatinine is a chemical waste molecule that is generated from muscle metabolism.. The creatinine is transported in the blood to the kidneys where it is filtered and passed into the urine. Because creatinine levels in urine are relatively constant from day to day, the creatinine content can be used as a normalization factor for urinary assays

Contents:
- 96 well plate.
- Color reagent (26ml).
- NaOH solution (3ml).
- Creatinine Stock Solution for standard curve (800µg/ml).

Not Included in Kit:
- Deionized water
- Plate reader
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Reagent preparation:
1) **Dilute standard-** Make a two folds dilution with the creatinine stock solution until the lowest concentration 12.5µg/ml is achieved.

Standard Dilution Stable

	Deionized H20	Creatinine	Concentration
#1		Stock	800µg/ml
#2	200µl	200µl #1	400µg/ml
#3	200µl	200µl #2	200µg/ml
#4	200µl	200µl #3	100µg/ml
#5	200µl	200µl #4	50µg/ml
#6	200µl	200µl #5	25µg/ml
#7	200µl	200µl #6	12.5µg/ml

2) **Dilute Urine Samples:** Recommended dilution is 1:10. In case of urine derived from hypertensive or diabetic subjects, a dilution of 1:5 may suffice.
3) **Reaction solution:** Add 2ml of NaOH solution into the tube containing 26 mL color reagent and vortex. This solution is stable for one day. If only half of the plate will be used we recommend you prepare 13ml of color reagent and 1ml of NaOH each time the plate is used.

Plate preparation:

Pipet 10µl of sample or standard into each well. For the blank, use 10µl of water. Add 140µl of reaction solution to each well. Incubate for 40-45 min and then measure the absorbance at 505 nm.

Calculation:

Plot the standard curve and use the linear equation to quantify the values of creatinine in the samples. Make sure to account for any dilution factors when calculating the results.

Example:

$y = 0.0015x + 0.0076$
$R^2 = 0.9988$