



**ELK Biotechnology**  
For research use only.

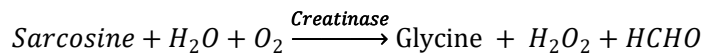
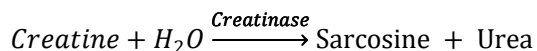
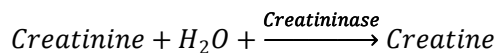
## Creatinine Assay Kit Assay Kit Instruction (Cat/No. BC020)

### I. Reagent Compositions

Reagent Name	Format:96T	Preservation Condition
Reagent I	18mL	4°C, avoid light
Reagent II	6mL	4°C, avoid light
Reagent III	100µL	4°C
96-well plate	1 plate	RT

Assay kit should be kept at 2-8°C with 1 year validity.

### II. Principles of the Kit



Note: 4-AAP represents 4-aminoantipyrine and ESPMT represents N-ethyl-N-(3-sulfopropyl)-3-methyl aniline.

Dyes generated absorb light at 546 nm and the optical density (OD) is proportional to the concentration of creatinine. Record the OD at 546 nm to measure the concentration of creatinine.

### III. Procedures

Reagents (µL)	Blank	Standard	Sample
Distilled Water	6		
Reagent III		6	
Sample			6
Reagent I	180	180	180
Incubate at 37°C for 5 min. Record the OD values $A_0$ at 546 nm.			
Reagent II	60	60	60
Incubate at 37°C for 5 min. Record the OD values $A_1$ at 546 nm. Calculation $\Delta A = A_1 - K \times A_0$ .			



## ELK Biotechnology

For research use only.

Note: K is the dilution factor and

$$K = \frac{V_{Sample} + V_{Reagent I}}{V_{Sample} + V_{Reagent I} + V_{Reagent II}} = \frac{186}{246}$$

### IV. Calculation Formula and Reference Value

$$C_{Creatinine} = \frac{\Delta A_{Sample} - \Delta A_{Blank}}{\Delta A_{Standard} - \Delta A_{Blank}} \times \frac{C_{Standard}}{442 \mu M}$$

### V. Significance of the Kit

It's put in the muscle cell by metabolism last product of creatine, and creatine is dehydrated like non-enzyme, and you always do certain quantity metabolism of a creatinine (Cr). Non-protein in the blood, it's discharged in the urine almost all Cr's where nitrogenous substance is one being filtered from renal glomerulus and without being reabsorbed. Therefore measurement of Cr in the blood will be an index of the filtration function by the kidney, and in addition to estimating the kidney function,

### VI. Notes

1. Urine samples should be diluted by saline with proper ratio before the measurement.
2. Sodium azide is added to reagent II and thus the reagent should be washed immediately if split on skin.
3. This kit is designed for research purpose only and cannot be used for diagnosis.
4. Different batches of kits are not recommended to be used simultaneously.