



## Urine Albumin-to-Creatinine Ratio Assay Kit

### Product Information

#### Cat.No.

Kit-2161

#### Product Overview

UACR Assay Kit provides a simple, sensitive, and high-throughput adaptable assay that detects albumin (detection range: 0.02- 2.5 mg/ml), creatinine (detection range: 0.002 -0.5 mg/ml) and urine albumin-to-creatinine ratio. The UACR ratio is determined in two steps: First, albumin is determined by using a probe (AB580) that specifically recognizes albumin (Ex/Em = 600/630 nm). Second, creatinine is converted to sarcosine via enzymatic reactions. Sarcosine is specifically oxidized generating a product that reacts with a probe producing a chromophore that can be detected at 570 nm.

#### Size

100 assays

#### Description

Urine Albumin-to-Creatinine Ratio (UACR) is one of the two markers used to determine chronic kidney disease (CKD). UACR is recommended to be measured on regular basis on people living with Type I and Type II diabetes. UACR is defined as the ratio between albumin (reported in mg/dl) and creatinine (reported in g/dl). This ratio estimates the amount of albumin excreted in urine during a 24 hr period. Albuminuria is diagnosed when UACR is greater than 30 mg albumin/g creatinine.

#### Applications

Estimation of albumin in biological samples  
Estimation of creatinine in biological samples  
Determination of UACR in mammalian urine samples

#### Storage

Store kit at -20°C, protected from light. Briefly spin small vials prior to opening. Read entire protocol before performing the assay.  
Creatinine Assay Buffer, Albumin Assay Buffer, and Albumin Diluent: Store at -20°C. Bring to room temperature (RT) before use.  
Albumin Probe (AB580) and Creatinine Probe: Light sensitive. Store at -20°C. Bring to RT before use.  
Creatinase, Creatininase, and Creatinine



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Enzyme Mix: Reconstitute with 220  $\mu$ l of Creatinine Assay Buffer. Aliquot and store at -20°C. Freeze/thaw should be limited to one time. Keep on ice during use. BSA Standard (2 mg/ml): Store at RT. Creatinine (10  $\mu$ mol): Reconstitute with 115  $\mu$ l of dH<sub>2</sub>O to generate 10  $\mu$ g/ $\mu$ l Creatinine Standard. Dissolve completely. Store at -20°C. Use within 2 months.

### Kit Components

Creatinine Assay Buffer: 25 ml Albumin Assay Buffer: 7 ml Albumin Diluent: 7 ml Albumin Probe (AB580): 0.4 ml Creatinine Probe: 0.2 ml Creatinase: 1 vial Creatinase: 1 vial Creatinine Enzyme Mix: 1 vial BSA Standard (2 mg/ml): 1 ml Creatinine Standard (10  $\mu$ mol): 1 vial

**Detection method** Fluorescence (Ex/Em = 600/630 nm) & Absorbance (OD 570 nm)

### Compatible Sample Types

• Albumin: urine, saliva, etc. • Creatinine: urine, serum, etc. • UACR: urine

### Features & Benefits

• Simple & Sensitive • High-Throughput adaptable • Suitable for detecting albumin (detection range: 0.02- 2.5 mg/ml), creatinine (detection range: 0.002 -0.5 mg/ml) and urine albumin-to-creatinine ratio (UACR)