

Uric Acid Assay Kit

(Catalog #K608-100; 100 assays; Store kit at -20°C)

I. Introduction:

Uric acid in serum is the end product of purine metabolism, and is cleared through the kidney by glomerular filtration. However, human often lacks the necessary enzyme called urate oxidase (Uricase), and therefore abnormal uric acid may be accumulated in blood. Recent evidences show the close association between serum urate level and cardiovascular morbidity and mortality, especially among persons at high cardiovascular risk, including those with hypertension, diabetes and congestion heart failure. BioVision's Uric Acid Assay Kit provides a convenient means for detecting uric acid in biological samples such as serum and urine. Pretreatment of samples are not required. Uric acid level can be measured using fluorometric (at Ex/Em = 535/587 nm) or colorimetric (at $\lambda = 570$ nm) methods.

II. Kit Contents:

Components	100 Assays	Cap Color	Part Number
Uric Acid Assay Buffer	25 ml	WM	K608-100-1
Uric Acid Probe	1 Vial	Red	K608-100-2
DMSO (Anhydrous)	0.4 ml	Brown	K608-100-3
Uric Acid Enzyme Mix	1 Vial	Green	K608-100-4
Uric Acid Standard (2 nmol/ μ l)	1 ml	Yellow	K608-100-5

III. Reagent Preparation and Storage Conditions:

Probe: Dissolve the Uric Acid Probe with 220 μ l of DMSO (provided) prior to use. Mix well and store at -20°C. Protect from light and moisture. Use within two months.

Uric Acid Enzyme Mix: Dissolve in 220 μ l Uric Acid Assay Buffer. Pipet up and down to dissolve it completely. Store at -20°C. Use within two months.

IV. Uric Acid Assay Protocol:

- Standard Curve Preparations:** For colorimetric assay, add 0, 4, 8, 12, 16, 20 μ l into each well individually. Adjust volume to 50 μ l/well with Uric Acid Assay Buffer to generate 0, 8, 16, 24, 32, 40 nmol/well of Uric Acid Standard.

For fluorometric assay, dilute the Uric Acid to 0.2 nmol/ μ l by adding 20 μ l into 180 μ l of Uric Acid Assay Buffer. Mix well. Add 0, 4, 8, 12, 16, 20 μ l into each well individually. Adjust volume to 50 μ l/well with Uric Acid Assay Buffer to generate 0, 0.8, 1.6, 2.4, 3.2, 4.0 nmol/well of the Uric Acid Standard.

- Sample Preparations:** Prepare test samples in 50 μ l/well with Uric Acid Assay Buffer in a 96-well plate. If using serum sample, serum (2-20 μ l/assay, normal serum contains ~0.3 nmol/ μ l uric acid) can be directly diluted in the Uric Acid Assay Buffer. We suggest using several dilutions to ensure that the readings are within the standard curve range.

- Reaction Mix Preparation:** Mix enough reagents for the number of assays performed: For each well, prepare a total 50 μ l Reaction Mix containing:

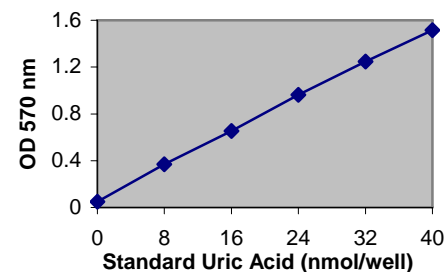
46 μ l Uric Acid Assay Buffer
2 μ l Uric Acid Probe
2 μ l Uric Acid Enzyme Mix,

- Mix well. Add 50 μ l of the Reaction Mix to each well that contains the uric acid standard and test samples. Incubate the reaction for 30 minutes at 37°C, protect from light.
- Measure OD 570nm for colorimetric assay or fluorescence at Ex/Em = 535/590 nm in a microplate reader.
- Calculation: Correct background by subtracting the reading of no uric acid control from all standard and sample readings (The background reading can be significant and must be subtracted from sample readings). Then apply the sample reading to the standard curve.

Uric Acid Concentration $C = A/V \times 1000$ (nmol/ml)

Where: A is the uric acid amount from the sample well in nmol.

V is the sample volume added into the sample well in microliter(s).
Uric acid molecular weight is 168.



V. RELATED PRODUCTS:

Glucose, sucrose assay kit
Lactate assay kit
NAD⁺/NADH assay kit
NADP⁺/NADPH assay kit
Antibodies
Apoptosis Detection Kits & Reagents
Buffers and Solutions
Cell Fractionation System
Cell Proliferation
Cell Damage & Repair
Cytotoxicity Assays
Growth Factors & Cytokines