Datasheet for ABIN1000254

BCG Albumin Assay Kit

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Overview

Quantity:	250 tests
Target:	BCG Albumin
Application:	Biochemical Assay (BCA)

Product Details

Sample Type:	Plasma, Serum, Urine
Specificity:	0.01 g/dL
Characteristics:	Sensitive and accurate. Use as little as 5 µL samples. Detection range 0.01 g/dL (1.5µM) to 5 g/dL (750µM) albumin in 96-well plate assay. Simple and high-throughput. The procedure involves addition of a single working reagent and incubation for 5 min. Can be readily automated as a high-throughput assay in 96-well plates for thousands of samples per day. Improved reagent stability and versatility. The optimized formulation has greatly enhanced reagent and signal stability. Cuvet or 96-well plate assay. No interference in biological samples. No pretreatments are needed. Assays can be directly performed on raw biological samples i.e., in the presence of lipid and protein.
Components:	Reagent: 50 mL. Albumin Standard: 1 mL 5 g/dL BSA.
Material not included:	Pipeting devices and accessories (e.g. 5 µL). Clear bottom 96-well plates (e.g. Corning Costar) and plate reader. Spectrophotometer and cuvets for measuring OD at 620nm.

Target Details

Target:	BCG Albumin
Background:	Quantitative determination of albumin by bromcresol green BCG method at 620nm. Procedure: 5 min. Albumin is the most abundant plasma protein in human. It accounts for about 60% of the total serum protein. Albumin plays important physiological roles, including maintenance of colloid osmotic pressure, binding of key substances such as long-chain fatty acids, bile acids, bilirubin, haematin, calcium and magnesium. It has anti-oxidant and anticoagulant effects, and also acts as a carrier for nutritional factors and drugs, as an effective plasma pH buffer. Serum albumin is a reliable prognostic indicator for morbidity and mortality, liver disease, nephritic syndrome, malnutrition and protein-losing enteropathies. High levels are associated with dehydration. Simple, direct and automation-ready procedures for measuring albumin concentration in biological samples are becoming popular in Research and Drug Discovery. This BCG albumin assay kit is designed to measure albumin directly in biological samples without any pretreatment. The improved method utilizes bromcresol green that forms a colored complex specifically with albumin. The intensity of the color, measured at 620nm, is directly proportional to the albumin concentration in the sample. The optimized formulation substantially reduces interference by substances in the raw samples.

Application Details

Application Notes:	Direct Assays: albumin in serum, plasma, urine, biological preparations. Drug discovery/Pharmacology: effects of drugs on albumin metabolism.
Protocol:	Procedure using 96-well plate: 1. Dilute standards in distilled water. Dilute serum and plasma samples 2 fold. Transfer 5 µL diluted standards and diluted samples to wells of a clear bottom plate. Store diluted standards at -20°C for future use. 2. Add 200 µL working reagent and tap lightly to mix. Avoid bubble. 3. Incubate 5 min at room temperature and read optical density at 570- 670nm (peak absorbance at 620nm). Procedure using cuvette: 1. Transfer 20 µL Blank, Standards and samples to appropriately labeled tubes. Add 1000 µL working reagent and tap lightly to mix. Incubate 5 min at room temperature. 2. Transfer to cuvet and read optical density at 620nm. Important: if sample OD is higher than the OD for standard, dilute samples with distilled water and repeat the assay.

Application Details

Reagent Preparation:	Important: bring reagent to room temperature before use.
Calculation of Results:	Subtract blank OD (water, #8) from the standard OD values and plot the OD against standard concentrations. Use the standard curve to determine the sample albumin concentration. Conversions: 0.1 g/dL albumin equals 15 µM, 0.1% or 1000 ppm.
Restrictions:	For Research Use only

Handling

Storage:	4 °C

Publications

Product cited in:

Sharifuzzaman, Abbass, Tinsley, Austin: "Subcellular components of probiotics Kocuria SM1 and Rhodococcus SM2 induce protective immunity in rainbow trout (Oncorhynchus mykiss, Walbaum) against Vibrio anguillarum." in: **Fish & shellfish immunology**, Vol. 30, Issue 1, pp. 347-53, (2011) (PubMed).

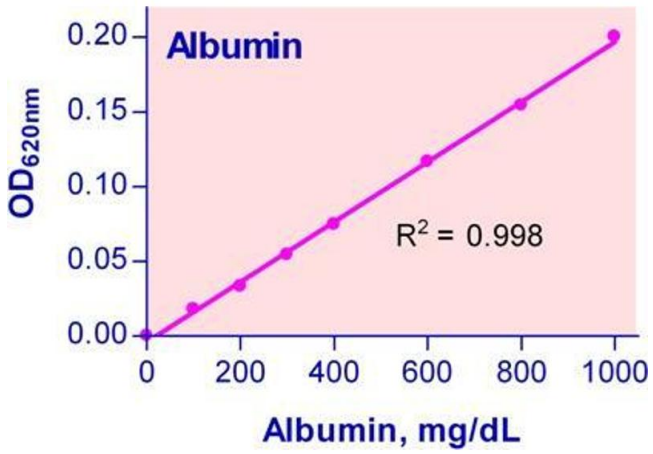
Waheed, Al-Eknah, El-Bahr: "Some biochemical characteristics and preservation of epididymal camel spermatozoa (Camelus dromedarius)." in: **Theriogenology**, Vol. 76, Issue 6, pp. 1126-33, (2011) (PubMed).

Sharifuzzaman, Austin: "Kocuria SM1 controls vibriosis in rainbow trout (Oncorhynchus mykiss, Walbaum)." in: **Journal of applied microbiology**, Vol. 108, Issue 6, pp. 2162-70, (2010) (PubMed).

Verty, Allen, Oldfield: "The effects of rimonabant on brown adipose tissue in rat: implications for energy expenditure." in: **Obesity (Silver Spring, Md.)**, Vol. 17, Issue 2, pp. 254-61, (2009) (PubMed).

Aldag, Gromov, García-Rubio, von Koenig, Schlichting, Jaun, Hilvert: "Probing the role of the proximal heme ligand in cytochrome P450cam by recombinant incorporation of selenocysteine." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 106, Issue 14, pp. 5481-6, (2009) (PubMed).

There are more publications referencing this product on: Product page



Biochemical Assay

Image 1.