



QuantiChrom™ Albumin Assay Kits

Albumin is the most abundant plasma protein in mammals. 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 antioxidant and anticoagulant effects, and also acts as a carrier for nutritional factors and drugs, as well 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. BioAssay Systems' albumin assay kit is designed to measure albumin directly in biological samples without any pretreatment. The improved method utilizes bromocresol green (BCG) and bromocresol purple (BCP) that forms a colored complex specifically with albumin. The intensity of the color is directly proportional to the albumin concentration in the sample. The optimized formulation substantially reduces interference by substances in the raw samples.

APPLICATIONS:

Direct Assays: albumin in serum, plasma, urine, biological preparations (e.g. fetal bovine serum).

Drug Discovery/Pharmacology: effects of drugs on albumin metabolism.

KEY FEATURES:

Sensitive and accurate. BCG Kit (**DIAG-250**): use as little as 5 μ L samples. Detection range 0.01 g/dL (1.5 μ M) to 5 g/dL (750 μ M) albumin in 96-well plate assay. BCP Kit (**DIAP-250**): use 20 μ L samples. Detection range 0.3 g/dL (45 μ M) to 5 g/dL (750 μ M) 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 the reagent and signal stability. Assays can be executed in cuvet or 96-well plate.

Low interference in biological samples. No pretreatments are needed. Assays can be directly performed on raw biological samples i.e., in the presence of

QuantiChrom™ BCG Albumin Assay Kit DIAG-250

PRODUCT INFORMATION:

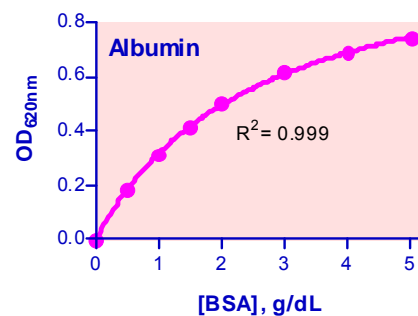
Each kit is sufficient for 250 assays in 96-well plate. Kit includes:

- 1 x 50mL BCG Albumin Reagent
- 1 x 1mL 5 g/dL Albumin Standard

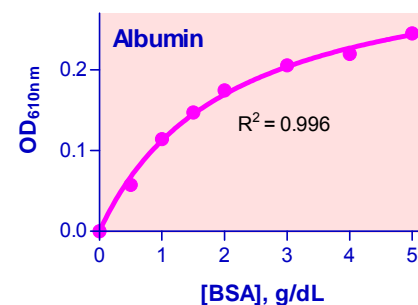
QuantiChrom™ BCP Albumin Assay Kit DIAP-250

Each kit is sufficient for 250 assays in 96-well plate. Kit includes:

- 1 x 50mL BCP Albumin Reagent
- 1 x 2mL 5 g/dL Albumin Standard



BCG Assay: Standard Curve in 96-well plate



BCP Assay: Standard Curve in 96-well plate

REFERENCES:

- [1]. Nicholson, JP, Wolmarans, MR and Park, GR (2000). The role of albumin in critical illness. *Br. J. Anaesthesia* 85(4): 599-610.
- [2]. Goldwasser, P and Feldman, J (1997). Association of serum albumin and mortality risk. *J. Clin. Epidemiol* 50: 693-703.
- [3]. Kamphuis, JS, Salden, HJM and Zijderhoudt, FMJ (2001). Albumine-analyse in plasma: vergelijking tussen de brooncresol-groen, broomcresolpurper en een immunoassay bij volwassen patienten met en zonder hemodialyse. *Ned Tijdschr Klin Chem* 26: 9-12.

