

Bovine Beta-Hydroxybutyric Acid (B-OHB) ELISA Kit

Catalog No: #EK11700



Package Size: #EK11700-1 48T #EK11700-2 96T

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Description

Product Name	Bovine Beta-Hydroxybutyric Acid (B-OHB) ELISA Kit
Brief Description	ELISA Kit
Applications	ELISA
Species Reactivity	Bovine (Bos taurus; Cattle)
Storage	<p>The stability of ELISA kit is determined by the loss rate of activity. The loss rate of this kit is less than 5% within the expiration date under appropriate storage condition.</p> <p>The loss rate was determined by accelerated thermal degradation test. Keep the kit at 37C for 4 and 7 days, and compare O.D.values of the kit kept at 37C with that of at recommended temperature. (referring from China Biological Products Standard, which was calculated by the Arrhenius equation. For ELISA kit, 4 days storage at 37C can be considered as 6 months at 2 - 8C, which means 7 days at 37C equaling 12 months at 2 - 8C).</p>

Application Details

Detect Range:1.23-100 µg/mL

Sensitivity:0.48 µg/mL

Sample Type:Serum, Plasma, Other biological fluids

Sample Volume: 1-200 µL

Assay Time:1-4.5h

Detection wavelength:450 nm

Product Description

Detection Method:SandwichTest principle:This assay employs a two-site sandwich ELISA to quantitate B-OHB in samples. An antibody specific for B-OHB has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and anyB-OHB present is bound by the immobilized antibody. After removing any unbound substances, a biotin-conjugated antibody specific for B-OHB is added to the wells. After washing, Streptavidin conjugated Horseradish Peroxidase (HRP) is added to the wells. Following a wash to remove any unbound avidin-enzyme reagent, a substrate solution is added to the wells and color develops in proportion to the amount of B-OHB bound in the initial step. The color development is stopped and the intensity of the color is measured.

Product Overview:Beta-Hydroxybutyric acid is a ketone body. It is a chiral compound having two enantiomers, D-3-hydroxybutyric acid and L-3-hydroxybutyric acid. Like the other ketone bodies, levels of beta-hydroxybutyrate are raised in ketosis. In humans, beta-hydroxybutyrate is synthesized in the liver from acetyl-CoA, and can be used as an energy source by the brain when blood glucose is low. Diabetic patients can have their ketone levels tested via urine or blood to indicate diabetic ketoacidosis. In alcoholic ketoacidosis, this ketone body is produced in greatest concentration. Both types of ketoacidosis result in an increase B-Hydroxybutyrate to oxaloacetate ratio, resulting in TCA cycle stalling and shifting of glucose towards ketone body production. Industrially, it can also be used for the synthesis of biodegradable plastics, such as poly. This polymer can be produced biologically by the bacteria, Alcaligenes eutrophus.

Note: This product is for in vitro research use only