

beta Hydroxybutyrate (beta HB) Assay Kit (Colorimetric) ab83390

[39 References](#) [5 图像](#)

概述

产品名称	beta Hydroxybutyrate (beta HB) Assay试剂盒(Colorimetric)
检测方法	Colorimetric
样品类型	Cell culture supernatant, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts
检测类型	Quantitative
灵敏度	> 0.01 mM
范围	0.01 mM - 0.2 mM
检测时间	0h 40m
产品概述	beta Hydroxybutyrate (beta HB) Assay Kit (Colorimetric) (ab83390) utilizes beta HB Dehydrogenase to generate a product which reacts with a colorimetric probe with an absorbance band at 450 nm.

The kit is an easy and accurate assay to measure beta HB levels in biological samples. The assay is linear for 1-20 nmol beta HB in up to 100 μ L samples or 0.01-0.2 mM of beta HB samples.

beta Hydroxybutyrate assay protocol summary:

- add reaction mix to sample and standard wells
- incubate for 30 min
- analyze with microplate reader

说明 This product is manufactured by BioVision, an Abcam company and was previously called K632 β -Hydroxybutyrate (β -HB) Colorimetric Assay Kit. K632-100 is the same size as the 100 test size of ab83390.

During diabetic ketoacidosis the liver produces ketone bodies (acetoacetate, acetone, and primarily beta-hydroxybutyrate) from the acetyl CoA produced from fatty acid oxidation. The very high rate of ketone body production outstrips the body's ability to utilize them as an energy source and the blood concentration builds up. As rather strong acids, they result in a significant drop in blood pH.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

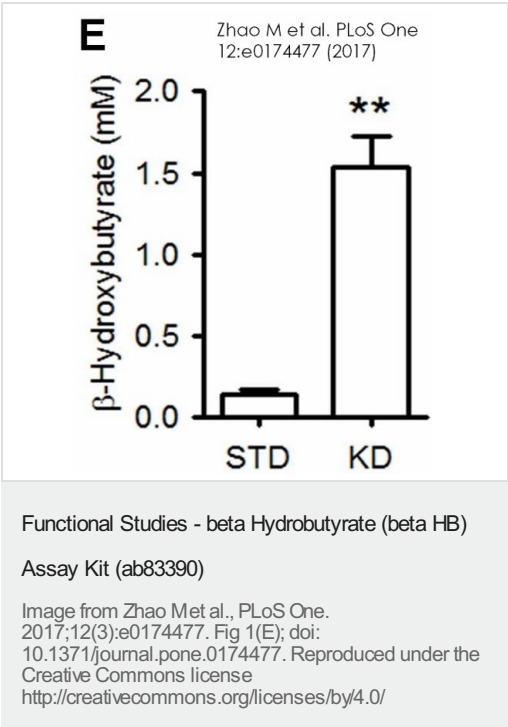
平台 Microplate reader

性能

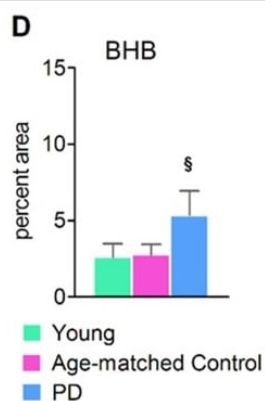
存放说明Store at -20°C. Please refer to protocols.

组件	100 tests
β-HB Enzyme Mix	1 vial
Assay Buffer V	1 x 25ml
β-HB Standard	1 vial
Developer Solution III	1 vial

图片



The plasma levels of total BHB was detected using ab83390. Five rats were in each group. Samples were collected from tail vein blood and were transferred into EDTA-containing tubes. After centrifugation at 1500×g for 15 min at room temperature, the plasma was transferred into a new tube and stored at -80°C until use. Values are presented as the mean ± S.E. (**p<0.01).



Wakade C et al. PLoS One
9:e109818 (2014)

Functional Studies - beta Hydrobutyrate (beta HB)

Assay Kit (ab83390)

Image from Wakade C et al., PLoS One.
2014;9(10):e109818. Fig 2(D).; doi:
10.1371/journal.pone.0109818. Reproduced under the
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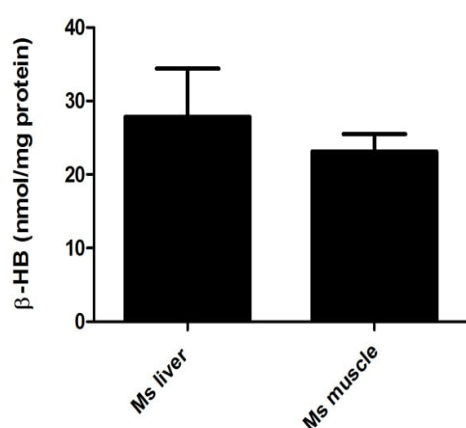
Human serum samples were filtered using a 10 kda MW cut-off spin filter ([ab93349](#)) spun at 14,000 RPM for 30 minutes. Beta Hydrobutyrate (BHB) was detected on a 96-well plate using ab83390.

Young control group (6 men, 25±1 years old).

Age-matched control group (13 men, 69±7 years old)

PD = Individuals diagnosed with idiopathic PD (15 men, 71±8 years old, duration of disease=10±6 years, H&Y=2.3±0.7, median =2).

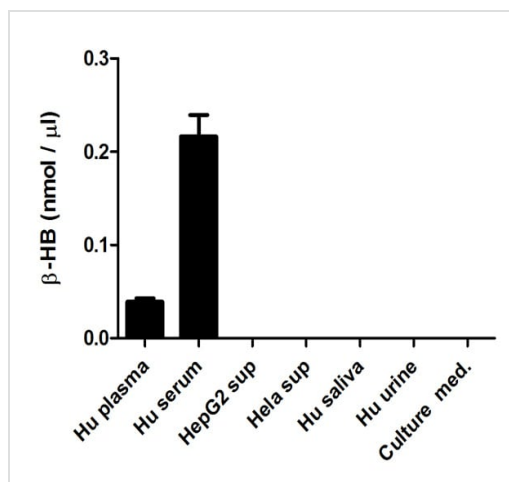
A trend approaching significance in increased levels of BHB in the plasma of PD patients compared to age-matched controls was observed. BHB is known to fluctuate in a variety of conditions including starvation, diabetes mellitus and other co-morbidities.



Functional Studies - beta Hydroxybutyrate (beta HB)

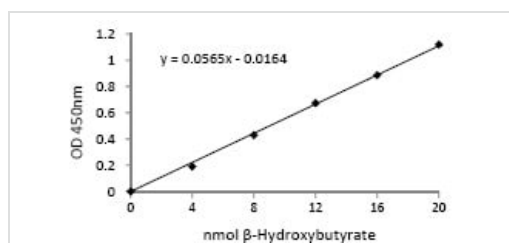
Assay Kit (ab83390)

Beta hydroxybutyrate in mouse tissue lysates showing quantity (nmol) per mg protein of tested sample



Beta hydroxybutyrate measured in biological fluids showing quantity (nmol) per microliter of tested sample

Functional Studies - beta Hydroxybutyrate (beta HB)
Assay Kit (ab83390)



beta HB Standard Curve: Assays were performed following ab83390 kit protocol.

Functional Studies - beta Hydroxybutyrate (beta HB)
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