

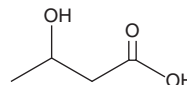
PRODUCT INFORMATION



(±)-β-Hydroxybutyrate

Item No. 14148

CAS Registry No.: 300-85-6
Formal Name: 3-hydroxy-butanoic acid
Synonyms: 3-Hydroxybutyric Acid, NSC 3806, βOHB
MF: C₄H₈O₃
FW: 104.1
Purity: ≥95%
UV/Vis.: λ_{max}: 210 nm
Supplied as: A liquid or solid*
Storage: -20°C
Stability: ≥2 years



Special Conditions: *Due to low melting point and other compound characteristics.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(±)-β-Hydroxybutyrate (βOHB) is supplied as a liquid. βOHB is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of βOHB in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. The solubility of βOHB in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

βOHB is an endogenous and specific inhibitor of class I histone deacetylases (HDACs), increasing acetylation of histones in a dose-dependent manner.¹ It does not increase acetylation of α-tubulin, indicating that it does not inhibit the class IIb HDAC6.¹ Fasting or caloric restriction, two conditions associated with increased βOHB abundance, increases global histone acetylation in mouse tissues.¹

Reference

1. Shimazu, T., Hirsche, M.D., Newman, J., *et al.* Suppression of oxidative stress by β-hydroxybutyrate, an endogenous histone deacetylase inhibitor. *Science* **339**, 211-214 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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