

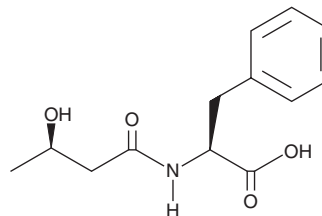
PRODUCT INFORMATION



β -Hydroxybutyrate Phenylalanine

Item No. 43376

CAS Registry No.: 3017120-67-8
Formal Name: N-[(3R)-3-hydroxy-1-oxobutyl]-L-phenylalanine
Synonyms: BHB-Phe, ((R)-3-Hydroxybutanoyl)-L-phenylalanine
MF: C₁₃H₁₇NO₄
FW: 251.3
Purity: \geq 95%
Supplied as: A neat solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

β -Hydroxybutyrate phenylalanine (BHB-Phe) is supplied as a neat solid. A stock solution may be made by dissolving the BHB-Phe in the solvent of choice, which should be purged with an inert gas. BHB-Phe is soluble (\geq 10 mg/ml) in DMSO and ethanol.

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. Organic solvent-free aqueous solutions of BHB-Phe can be prepared by directly dissolving the neat solid in aqueous buffers. BHB-Phe is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

BHB-Phe is a secondary ketone body metabolite composed of β -hydroxybutyrate (BHB) conjugated to the essential amino acid L-phenylalanine (Item No. 31498).¹ It is formed endogenously by cytosolic non-specific dipeptidase 2 (CNDP2) following ketogenesis. BHB-Phe (50 mg/kg per day) reduces food intake, body weight, and the respiratory exchange ratio (RER) in diet-induced obese (DIO) mice without affecting activity, oxygen consumption (VO₂), or carbon dioxide production (VCO₂).

Reference

1. Moya-Garzon, M.D., Wang, M., Li, V.L., *et al.* A β -hydroxybutyrate shunt pathway generates anti-obesity ketone metabolites. *Cell* **188**(1), 175-186 (2025).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM