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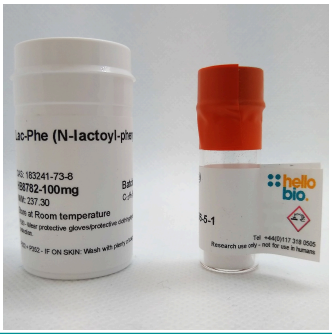
DATASHEET

Lac-Phe

Product overview

Name	Lac-Phe
Cat No	HB8782
Alternative names	N-l-lactoyl-Phe
Biological action	Metabolite
Purity	>99%
Description	Exercise induced metabolite that suppresses food intake and obesity

Images



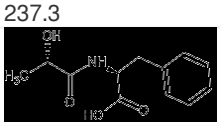
Biological Data

Biological description	L-lactate-derived metabolite which is upregulated following exercise. Recently shown to reduce food intake by ~50% in diet-induced obese (DIO) mice, without affecting movement or energy expenditure. Decreases body weight, adiposity and improves glucose homeostasis when chronically administered.

Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in water (50 mM), and in DMSO (100 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	(2S)-2-[(2S)-2-hydroxypropanamido]-3-phenylpropanoic acid
Molecular Weight	237.3
Chemical structure	
Molecular Formula	$C_{12}H_{15}NO_4$
CAS Number	183241-73-8
PubChem identifier	69759947

SMILES	C[C@H](O)C(=O)N[C@@H](Cc1ccccc1)C(=O)O
Source	Synthetic
InChi	InChI=1S/C12H15NO4/c1-8(14)11(15)13-10(12(16)17)7-9-5-3-2-4-6-9/h2-6,8,10,14H,7H2,1H3,(H,13,15)(H,16,17)/t8-,10-/m0/s1
Appearance	White solid

References

An exercise-inducible metabolite that suppresses feeding and obesity.

Li VL et al (2022) Nature 606

PubMedID 35705806

N-lactoyl-amino acids are ubiquitous metabolites that originate from CNDP2-mediated reverse proteolysis of lactate and amino acids.

Jansen RS et al (2015) Proceedings of the National Academy of Sciences of the United States of America 112

PubMedID 25964343