

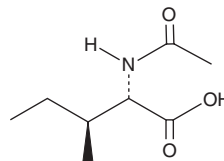
PRODUCT INFORMATION



N-acetyl-L-Isoleucine

Item No. 35545

CAS Registry No.: 3077-46-1
Synonyms: N-Acetyl isoleucine, NSC 203807
MF: $C_8H_{15}NO_3$
FW: 173.2
Purity: $\geq 95\%$
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

N-acetyl-L-Isoleucine is supplied as a solid. A stock solution may be made by dissolving the N-acetyl-L-isoleucine in the solvent of choice, which should be purged with an inert gas. N-acetyl-L-isoleucine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of N-acetyl-L-isoleucine in ethanol and DMF is approximately 20 mg/ml and approximately 14 mg/ml in DMSO.

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 N-acetyl-L-isoleucine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of N-acetyl-L-isoleucine in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

N-acetyl-L-Isoleucine is an acetylated form of L-isoleucine. Urine levels of N-acetyl-L-isoleucine are increased in patients with maple syrup urine disease (MSUD), an inborn error of metabolism characterized by a deficiency in the branched-chain α -ketoacid dehydrogenase complex, the complex that catalyzes the degradation of branched-chain amino acids, leading to the accumulation of branched-chain amino acids in the plasma and urine, a maple syrup-like odor in the urine, and neurological impairments.¹

Reference

1. Jellum, E., Horn, L., Thoresen, O., *et al.* Urinary excretion of N-acetyl amino acids in patients with some inborn errors of amino acid metabolism. *Scand. J. Clin. Lab. Invest. Suppl.* **184**, 21-26 (1986).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/12/2022

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