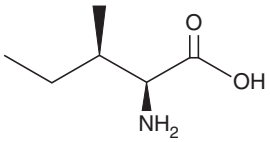
PRODUCT INFORMATION

L-Alloisoleucine

Item No. 34904

CAS Registry No.:	1509-34-8
Synonym:	NSC 206282
MF:	$C_6H_{13}NO_2$
FW:	131.2
Purity:	≥95%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

L-Alloisoleucine is supplied as a solid. A stock solution may be made by dissolving the L-alloisoleucine in the solvent of choice, which should be purged with an inert gas. L-Alloisoleucine is soluble in the organic solvent acetic acid (80%) at a concentration of approximately 10 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. Organic solvent-free aqueous solutions of L-alloisoleucine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of L-alloisoleucine in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-Alloisoleucine is a branched-chain amino acid and diastereomer of L-isoleucine.[1] It is formed from L-isoleucine by transamination.[2] Plasma L-alloisoleucine levels 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]

References

1. Schadewaldt, P., Bodner-Leidecker, A., Hammen, H.W., *et al.* Significance of L-alloisoleucine in plasma for diagnosis of maple syrup urine disease. *Clin. Chem.* **45(10)**, 1734-1740 (1999).
2. Schadewaldt, P., Bodner-Leidecker, A., Hammen, H.W., *et al.* Formation of L-alloisoleucine *in vivo*: An L-[^{13}C]isoleucine study in man. *Pediatr. Res.* **47(2)**, 271-277 (2000).

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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