

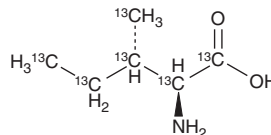
PRODUCT INFORMATION



L-Isoleucine-¹³C₆

Item No. 9004090

CAS Registry No.: 201740-82-1
Formal Name: L-isoleucine-1,2,3,3',4,5-¹³C₆
Synonym: L-(+)-Isoleucine-¹³C₆
MF: [¹³C]₆H₁₃NO₂
FW: 137.1
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-Isoleucine-¹³C₆ is supplied as a solid. A stock solution may be made by dissolving the L-isoleucine-¹³C₆ in water. We do not recommend storing the aqueous solution for more than one day.

Description

L-Isoleucine-¹³C₆ is intended for use as an internal standard for the quantification of L-isoleucine by GC- or LC-MS. L-Isoleucine is an essential and branched-chain amino acid.¹ It is an isomer of L-leucine (Item No. 34342) and a diastereomer of L-alloisoleucine (Item No. 34904) that functions as a nitrogen donor and has roles in glucose consumption, fatty acid metabolism, and immune function.^{1,2} Urinary levels of L-isoleucine are increased in patients with deficiencies in β-ketothiolase, short/branched-chain specific acyl-CoA dehydrogenase (SBCAD), or 2-methyl-3-hydroxybutyryl-CoA dehydrogenase (MHBBD), inborn errors of metabolism characterized by episodic ketoacidosis and neurological impairments.³

References

1. Nie, C., He, T., Zhang, W., *et al.* Branched chain amino acids: Beyond nutrition metabolism. *Int. J. Mol. Sci.* **19**(4), 954 (2018).
2. Zhang, S., Zeng, X., Ren, M., *et al.* Novel metabolic and physiological functions of branched chain amino acids: A review. *J. Anim. Sci. Biotechnol.* **8**, 10 (2017).
3. Korman, S.H. Inborn errors of isoleucine degradation: A review. *Mol. Genet. Metab.* **89**(4), 289-299 (2006).

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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