

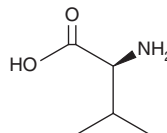
PRODUCT INFORMATION



L-Valine

Item No. 38709

CAS Registry No.: 72-18-4
Synonyms: (+)-Valine, (S)-Valine, NSC 76038
MF: $C_5H_{11}NO_2$
FW: 117.1
Purity: $\geq 90\%$
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

L-Valine is supplied as a solid. A stock solution may be made by dissolving the L-valine in water. We do not recommend storing the aqueous solution for more than one day.

Description

L-Valine is a branched-chain essential amino acid that is obtained *via* the diet.¹ It is considered glucogenic due to its catabolism that ultimately forms succinyl-CoA, which enters the citric acid cycle.² A deficiency in branched-chain dehydrogenase, the enzyme that catabolizes valine, isoleucine, and leucine, leads to maple syrup urine disease, a disorder characterized by progressive ketoacidosis, failure to thrive, neurological dysfunction, and, potentially, death.^{1,3}

References

1. Berg, J.M., Tymoczko, J.L., and Stryer, L. *Biochemistry*. 5th ed., W.H. Freeman, New York (2002).
2. Massey, K.A., Blakeslee, C.H., and Pitkow, H.S. A review of physiological and metabolic effects of essential amino acids. *Amino Acids* **14**(4), 271-300 (1998).
3. Farias, H.R., Gabriel, J.R., Cecconi, M.L., *et al.* The metabolic effect of α -ketoisocaproic acid: *In vivo* and *in vitro* studies. *Metab. Brain Dis.* **36**(1), 185-192 (2021).

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

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