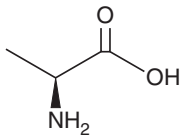
# PRODUCT INFORMATION

## L-Alanine

*Item No. 29757*

**CAS Registry No.:** 56-41-7
**Synonyms:** 2-Aminopropanoic Acid, α-Alanine, L-(+)-Alanine, (S)-Alanine, (2S)-2-Azaniumylpropanoate, NSC 206315
**MF:** $C_3H_7NO_2$
**FW:** 89.1
**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-alanine is supplied as a solid. Aqueous solutions of L-alanine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of L-alanine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

L-Alanine is a non-essential amino acid.[1] It is produced by direct β-decarboxylation of L-aspartate by L-aspartate β-decarboxylase or transamination of pyruvate in the glucose-alanine cycle and is a precursor for gluconeogenesis.[2] Dysregulation of L-alanine metabolism is associated with various disease states, including diabetes, metabolic syndrome, ketotic hypoglycemia, and acquired acute lactic acidosis.

### References

1. Graber, R., Kasper, P., Malashkevich, V.N., *et al*. Conversion of aspartate aminotransferase into an L-aspartate β-decarboxylase by a triple active-site mutation. *J. Biol. Chem.* **274(44)**, 31203-31208 (1999).
2. Felig, P. Progress in endocrinology and metabolism: The glucose-alanine cycle. *Metab*. **22(2)**, 179-207 (1973).



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