

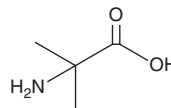
PRODUCT INFORMATION



2-Aminoisobutyric Acid

Item No. 45031

CAS Registry No.: 62-57-7
Formal Name: 2-methyl-alanine
Synonyms: Aib, α -Aminoisobutanoic Acid, α -Aminoisobutyric Acid, α -Methylalanine
MF: $C_4H_9NO_2$
FW: 103.1
Purity: $\geq 98\%$
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

2-Aminoisobutyric acid is supplied as a solid. Aqueous solutions of 2-aminoisobutyric acid can be prepared by directly dissolving the solid in aqueous buffers. 2-Aminoisobutyric acid is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

2-Aminoisobutyric acid is a non-proteinogenic amino acid.¹ It contains a two-fold substitution at the α -carbon, which induces the formation of β turns or helices when incorporated into peptides.² The presence of 2-aminoisobutyric acid residues is a defining characteristic of peptide-2-aminoisobutyric acid-alcohol (peptaibol) compounds, which are amphipathic oligopeptide fungal metabolites.¹ 2-Aminoisobutyric acid has been ribosomally incorporated into synthetic peptides using a cell-free tRNA_{1^{Val}}-based translation system.³

References

1. Finamore, C., Festa, C., Cammarota, M., *et al.* A journey into the blue: Current knowledge and emerging insights into marine-derived peptaibols. *Mar. Drugs* **23**(12), 458 (2025).
2. Heimgartner, H. 3-Amino-2H-azirines. Synthons for α,α -disubstituted α -amino acids in heterocycle and peptide synthesis. *Angew. Chem. Int. Ed. Engl.* **30**(3), 238-264 (1991).
3. Iqbal, E.S., Dods, K.K., and Hartman, M.C.T. Ribosomal incorporation of backbone modified amino acids via an editing-deficient aminoacyl-tRNA synthetase. *Org. Biomol. Chem.* **16**(7), 1073-1078 (2018).

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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