

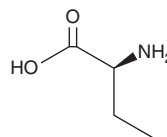
# PRODUCT INFORMATION



## L-2-Aminobutyric Acid

Item No. 38750

**CAS Registry No.:** 1492-24-6  
**Formal Name:** 2S-amino-butanoic acid  
**Synonyms:** L-2-ABA, L-Butyrine, L-Homoalanine, NSC 97060  
**MF:** C<sub>4</sub>H<sub>9</sub>NO<sub>2</sub>  
**FW:** 103.1  
**Purity:** ≥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

L-2-Aminobutyric acid is supplied as a solid. Aqueous solutions of L-2-aminobutyric acid can be prepared by directly dissolving the solid in aqueous buffers. The solubility of L-2-aminobutyric acid 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-2-Aminobutyric acid is a non-proteinogenic amino acid.<sup>1</sup> It inhibits LPS-induced nitric oxide (NO) production in, and reduces the bactericidal activity of, isolated mouse bone marrow-derived macrophages (BMDMs) when used at concentrations of 0.1 and 1 mM. L-2-Aminobutyric acid (75 mg/kg) increases survival in mouse models of sepsis induced by LPS or cecum ligation and puncture and decreases disease severity in a mouse model of inflammatory bowel disease (IBD) induced by dextran sodium sulfate (DSS; Item No. 23250). Serum levels of L-2-aminobutyric acid are increased in patients with COVID-19 and increased serum levels are associated with higher overall survival in patients with head and neck cancer.<sup>2,3</sup> It has been used in the synthesis of several compounds, including the antiepileptic levetiracetam (Item No. 9001820) and antimycobacterial agent ethambutol (Item No. 23713).<sup>4</sup>

### References

1. Li, F., Xia, Y., Yuan, S., *et al.*  $\alpha$ -Aminobutyric acid constrains macrophage-associated inflammatory diseases through metabolic reprogramming and epigenetic modification. *Int. J. Mol. Sci.* **24**(13), 10444 (2023).
2. Atila, A., Alay, H., Yaman, M.E., *et al.* The serum amino acid profile in COVID-19. *Amino Acids* **53**(10), 1569-1588 (2021).
3. Cadoni, G., Giraldi, L., Chiarla, C., *et al.* Prognostic role of serum amino acids in head and neck cancer. *Dis. Markers* 2291759 (2020).
4. Zhang, K., Li, H., Cho, K.M., *et al.* Expanding metabolism for total biosynthesis of the nonnatural amino acid L-homoalanine. *Proc. Natl. Acad. Sci. USA* **107**(14), 6234-6239 (2010).

#### 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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