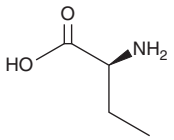
PRODUCT INFORMATION

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:	$C_4H_9NO_2$
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.[1] 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.[2,3] It has been used in the synthesis of several compounds, including the antiepileptic levetiracetam (Item No. 9001820) and antimycobacterial agent ethambutol (Item No. 23713).[4]

References

1. Li, F., Xia, Y., Yuan, S., *et al.* α-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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM