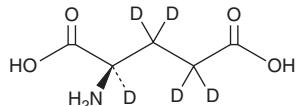


PRODUCT INFORMATION

D-Glutamic Acid-d₅

Item No. 34840

CAS Registry No.:	14341-88-9
Formal Name:	D-glutamic-2,3,3,4,4-d ₅ acid
Synonym:	Glutamic Acid-d ₅
MF:	C ₅ H ₄ D ₅ NO ₄
FW:	152.2
Chemical Purity:	≥98% (D-Glutamic Acid)
Deuterium	
Incorporation:	≥99% deuterated forms (d ₁ -d ₅); ≤1% d ₀
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

D-Glutamic acid-d₅ is intended for use as an internal standard for the quantification of D-glutamic acid (Item No. 31503) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

D-glutamic acid is an amino acid and a component of bacterial peptidoglycan.¹ It is linked to UDP-N-acetylmuramoyl-L-alanine (UDP-MurNAc-L-Ala) by the muramyl ligase MurD to form UDP-MurNAc-L-Ala-D-glutamic acid, a building block in the biosynthesis of bacterial peptidoglycan. D-glutamic acid is also a component of poly-γ-glutamic acid, a polymer produced by *Bacillus*.²

References

1. Koudmi, I., Levesque, R.C., and Paradis-Bleau, C. The biology of Mur ligases as an antibacterial target. *Mol. Microbiol.* **94**(2), 242-253 (2014).
2. Ogasawara, Y., Shigematsu, M., Sato, S., et al. Involvement of peptide epimerization in poly-γ-glutamic acid biosynthesis. *Org. Lett.* **21**(11), 3972-3975 (2019).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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