

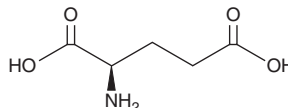
# PRODUCT INFORMATION



## D-Glutamic Acid

Item No. 31503

**CAS Registry No.:** 6893-26-1  
**Synonyms:** Glutamic Acid, NSC 77686  
**MF:** C<sub>5</sub>H<sub>9</sub>NO<sub>4</sub>  
**FW:** 147.1  
**Purity:** ≥95%  
**Supplied as:** A crystalline 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 is supplied as a crystalline solid. Aqueous solutions of D-glutamic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of D-glutamic acid in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

D-glutamic acid is an amino acid and a component of bacterial peptidoglycan.<sup>1</sup> 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*.<sup>2</sup>

### References

1. Kouidmi, 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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