

PRODUCT INFORMATION



D-Pyrohomoglutamic Acid

Item No. 31693

CAS Registry No.: 72002-30-3

Formal Name: (2R)-6-oxo-2-piperidinecarboxylic acid

Synonyms: D-pHgu, (R)-6-Oxopiperidine-2-carboxylic Acid

MF: C₆H₉NO₃

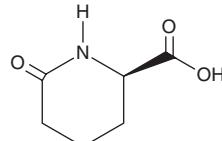
FW: 143.1

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-Pyrohomoglutamic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the D-pyrohomoglutamic acid in the solvent of choice, which should be purged with an inert gas. D-Pyrohomoglutamic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of D-pyrohomoglutamic acid in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of D-pyrohomoglutamic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of D-pyrohomoglutamic 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

D-Pyrohomoglutamic acid is a building block.¹ It has been used in the synthesis of immunoproteasome low molecular mass polypeptide 2 (LMP2) subunit inhibitors and is a component of substance P (Item No. 24035) peptide analogs.^{1,2}

References

1. Johnson, H.W.B., Anderl, J.L., Bradley, E.K., et al. Discovery of highly selective inhibitors of the immunoproteasome low molecular mass polypeptide 2 (LMP2) subunit. *ACS Med. Chem. Lett.* **8**(4), 413-417 (2017).
2. Hashimoto, T., Uchida, Y., Nishijima, M., et al. Syntheses and biological activities of substance P analogs containing L- and D-homoglutamine and L- and D-pyrohomoglutamic acid at position 5 and 6. *B. Chem. Soc. Jpn.* **60**(3), 1207-1209 (1987).

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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