

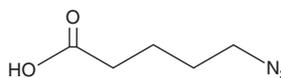
PRODUCT INFORMATION



5-Azidopentanoic Acid

Item No. 16517

CAS Registry No.: 79583-98-5
Formal Name: 5-azido-pentanoic acid
Synonyms: 5-Azidovaleric Acid,
Click Tag™ 5-Azidopentanoic Acid
MF: C₅H₉N₃O₂
FW: 143.1
Purity: ≥98%
UV/Vis.: λ_{max}: 215, 289 nm
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

5-Azidopentanoic acid is supplied as a neat oil. A stock solution may be made by dissolving the 5-azidopentanoic acid in the solvent of choice, which should be purged with an inert gas. 5-Azidopentanoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 5-azidopentanoic 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 5-azidopentanoic acid can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of 5-azidopentanoic 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

5-Azidopentanoic acid is a building block for use in click chemistry reactions that enables selective conjugation of peptides with various molecules and can be used for the cyclization of peptides.^{1,2} The azido moiety reacts with acetylenes in the presence of copper yielding triazoles that can function as versatile linkers.³

References

1. Lutz, J.-F. and Zarafshani, Z. Efficient construction of therapeutics, bioconjugates, biomaterials and bioactive surfaces using azide-alkyne “click” chemistry. *Adv. Drug Deliv. Rev.* **60(9)**, 958-970 (2008).
2. Punna, S., Kuzelka, J., Wang, Q., *et al.* Head-to-tail peptide cyclodimerization by copper-catalyzed azide-alkyne cycloaddition. *Angew. Chem. Int. Ed. Engl.* **44(15)**, 2215-2220 (2005).
3. de Miguel, G., Wielopolski, M., Schuster, D.I., *et al.* Triazole bridges as versatile linkers in electron donor-acceptor conjugates. *J. Am. Chem. Soc.* **133(33)**, 13036-13054 (2011).

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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