

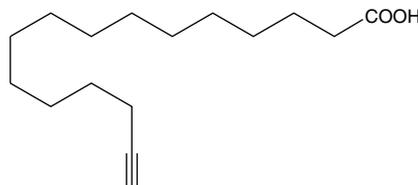
Product Information



Palmitic Acid Alkyne

Item No. 13266

CAS Registry No.: 99208-90-9
Formal Name: 15-hexadecyanoic acid
Synonym: Alk-14, Click Tag™ Palmitic Acid Alkyne
MF: C₁₆H₂₈O₂
FW: 252.4
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that palmitic acid alkyne be stored as supplied at -20°C. It should be stable for at least two years.

Palmitic acid alkyne is supplied as a crystalline solid. A stock solution may be made by dissolving the palmitic acid alkyne in the solvent of choice. Palmitic acid alkyne is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of palmitic acid alkyne in these solvents is approximately 20 mg/ml.

Palmitic acid alkyne is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, palmitic acid alkyne should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Palmitic acid alkyne has a solubility of approximately 0.15 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Protein S-palmitoylation is the post-translational acylation of proteins and serves to regulate localization, stability, and interaction with associates and substrates.¹ Palmitic acid alkyne is a form of palmitic acid (Item No. 10006627) with an ω-terminal alkyne. The terminal alkyne group can be used in linking reactions, known as click chemistry; this chemistry is characterized by high dependability and specificity of the azide-alkyne bioconjugation reactions.^{2,3} The use of palmitic acid alkyne and related lipids in isolating palmitoylated proteins has been described.⁴⁻⁶

References

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3. Lutz, J.-F. and Zarfshani, Z. Efficient construction of therapeutics, bioconjugates, biomaterials and bioactive surfaces using azide-alkyne “click” chemistry. *Adv. Drug Deliv. Rev.* **60**, 958-970 (2008).
4. Martin, B.R. and Cravatt, B.F. Large-scale profiling of protein palmitoylation in mammalian cells. *Nat. Methods* **6(2)**, 135-138 (2009).
5. Yap, M.C., Kostiuk, M.A., Martin, D.D.O., et al. Rapid and selective detection of fatty acylated proteins using ω-alkynyl-fatty acids and click chemistry. *J. Lipid Res.* **51**, 1566-1580 (2010).
6. Jiang, H., Khan, S., Wang, Y., et al. SIRT6 regulates TNF-α secretion through hydrolysis of long-chain fatty acyl lysine. *Nature* **496**, 110-113 (2013).

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For a list of related products please visit: www.caymanchem.com/catalog/13266

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com