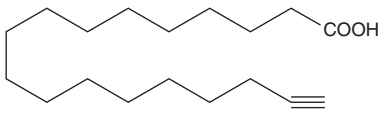
PRODUCT INFORMATION

17-Octadecynoic Acid

Item No. 90270

CAS Registry No.:	34450-18-5
Synonyms:	Alk-16, FA 18:2, Click Tag™ 17-Octadecynoic Acid, 17-ODYA
MF:	$C_{18}H_{32}O_2$
FW:	280.5
Purity:	≥98%
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

17-Octadecynoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-octadecynoic acid in the solvent of choice, which should be purged with an inert gas. 17-Octadecynoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 17-octadecynoic acid in ethanol and DMF is approximately 10 mg/ml and approximately 1 mg/ml in DMSO.

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 17-octadecynoic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 17-octadecynoic acid in 0.15 M Tris-HCl, pH 8.5, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

17-Octadecynoic Acid (17-ODYA) is a fatty acid alkyne. It is a suicide inhibitor of leukotriene B_4 20-hydroxylase and renal CYP450 ω-hydroxylase.[1,2] 17-ODYA (10 µM) completely inhibits the bradykinin-dependent transport of sodium chloride in rat TALH cells.[2] It has been used as a click chemistry probe for labeling palmitoylation substrates *in vitro*.[3] It has also been used to study the formation of lipid droplets in live THP-1 macrophages and *C. elegans*.[4]

References

1. Shak, S., Reich, N.O., Goldstein, I.M., *et al.* Leukotriene B4 ω-hydroxylase in human polymorphonuclear leukocytes. Suicidal inactivation by acetylenic fatty acids. *J. Biol. Chem.* **260:24,** 13023-13028 (1985).
2. Grider, J.S., Falcone, J.C., Kilpatrick, E.L., *et al.* P450 arachidonate metabolites mediate bradykinin-dependent inhibition of NaCl transport in the rat thick ascending limb. *Can. J. Physiol. Pharmacol.* **75(2),** 91-96 (1997).
3. Martin, B.R. and Cravatt, B.F. Large-scale profiling of protein palmitoylation in mammalian cells. *Nat. Methods* **6(2),** 135-138 (2009).
4. Wei, L., Hu, F., Shen, Y., *et al.* Live-cell imaging of alkyne-tagged small biomolecules by stimulated Raman scattering. *Nat. Methods* **11(4),** 410-412 (2014).

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