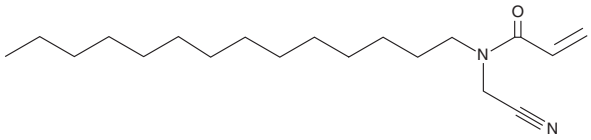
PRODUCT INFORMATION

Cyano-myracrylamide

Item No. 35155

CAS Registry No.: 2801702-34-9
Formal Name: N-(cyanomethyl)-N-tetradecyl-2-propenamide
Synonym: CMA
MF: $C_{19}H_{34}N_2O$
FW: 306.5
Purity: ≥98%
UV/Vis.: λ_{max}: 234 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

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

Description

CMA is an inhibitor of zinc finger DHHC domain-containing (zDHHC) palmitoyltransferase 20 (zDHHC20; IC_{50} = 1.35 µM in a cell-free assay).[1] It selectively inhibits zDHHC20 over acyl-protein thioesterase 1 (APT-1) and APT-2 at 50 µM. CMA (5-20 µM) inhibits S-acylation of *Legionella* E3 ligase GobX, MyD88, and Ras, which are substrates of zDHHC20, zDHHC9, and zDHHC6, respectively, in HEK293T cells expressing recombinant *Legionella* GobX, recombinant human MyD88, or endogenous Ras. Unlike the zDHHC inhibitor 2-bromopalmitate (2BP), CMA is not toxic to HEK293T cells at 40 µM.

Reference

1. Azizi, S.-A., Lan, T., Delalande, C., *et al.* Development of an acrylamide-based inhibitor of protein S-acylation. *ACS Chem. Biol.* **16(8)**, 1546-1556 (2021).

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