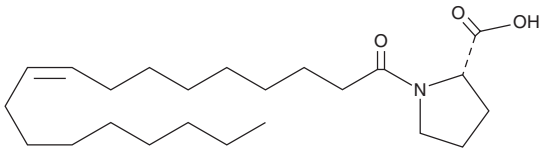
PRODUCT INFORMATION

N-Oleoyl Proline

Item No. 20369

CAS Registry No.:	107432-37-1
Formal Name:	1-[(9Z)-1-oxo-9-octadecen-1-yl]-L-proline
MF:	$C_{23}H_{41}NO_3$
FW:	379.6
Purity:	≥95%
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

N-Oleoyl proline is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of N-oleoyl proline in ethanol and DMSO is approximately 12 mg/ml and approximately 10 mg/ml in DMF.

N-Oleoyl proline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, N-oleoyl proline should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. N-Oleoyl proline has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

N-Oleoyl proline is an N-acyl amine that has been detected in bovine brain extracts and *D. melanogaster* larvae using mass spectrometry.[1,2] In a preclinical model of pain, mice lacking fatty acid amide hydrolase (FAAH KO) had decreased N-oleoyl proline levels in lumbar spinal cord after capsaicin administration (1 µg/10 µl).[3] N-Oleoyl proline also has surfactant properties (critical micelle concentration = 4.8 µM).[4]

References

1. Tan, B., O'Dell, D.K., Yu, Y.W., *et al.* Identification of endogenous acyl amino acids based on a targeted lipidomics approach. *J. Lipid. Res.* **51(1)**, 112-119 (2010).
2. Tortoriello, G., Rhodes, B.P., Takacs, S.M., *et al.* Targeted lipidomics in *D. melanogaster* identifies novel 2-monoacylglycerols and N-acyl amides. *PLoS One* **8(7)**, e67865 (2013).
3. Carey, L.M., Slivicki, R.A., Leishman, E., *et al.* A pro-nociceptive phenotype unmasked in mice lacking fatty-acid amide hydrolase. *Mol. Pain* **12** (2016).
4. Sreenu, M., Nayak, R.R., Prasad, R.B.N., *et al.* Synthesis, surface and micellar properties of sodium N-oleoyl amino acids. *Colloids Surf. A. Physicochem. Eng. Aspects* **449**, 74-81 (2014).

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