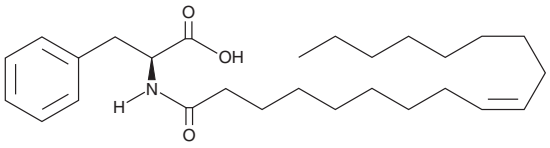
PRODUCT INFORMATION

N-Oleoyl-L-phenylalanine

Item No. 28921

CAS Registry No.:	136560-78-6
Formal Name:	N-[(9Z)-1-oxo-9-octadecen-1-yl]-L-phenylalanine
Synonyms:	18-1-Phe, C18:1-Phe, FA 18:1-Phe
MF:	$C_{27}H_{43}NO_3$
FW:	429.6
Purity:	≥95%
Supplied as:	A solution in ethanol
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-L-phenylalanine is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of N-oleoyl-L-phenylalanine in these solvents is approximately 15 and 20 mg/ml, respectively.

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. If an organic solvent-free solution of N-oleoyl-L-phenylalanine is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of N-oleoyl-L-phenylalanine in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

N-Oleoyl-L-phenylalanine is an N-acyl amide.[1] It increases the oxygen consumption rate (OCR) of mitochondria isolated from mouse brown adipose tissue in a Seahorse assay and decreases oligomycin-induced increases in the mitochondrial membrane potential in C2C12 cells, indicating mitochondrial uncoupling activity, when used at a concentration of 50 µM. N-Oleoyl-L-phenylalanine (30 mg/kg for eight days) reduces food intake and body weight of diet-induced obese mice.

Reference

1. Long, J.Z., Svensson, K.J., Bateman, L.A., *et al.* The secreted enzyme PM20D1 regulates lipidated amino acid uncouplers of mitochondria. *Cell* **166(2)**, 1-12 (2016).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM