

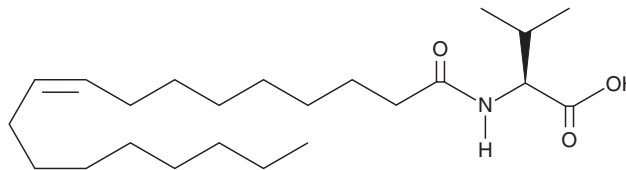
# PRODUCT INFORMATION



## N-Oleoyl Valine

Item No. 20065

CAS Registry No.: 60374-41-6  
Formal Name: N-[(9Z)-1-oxo-9-octadecen-1-yl]-L-valine  
MF:  $C_{23}H_{43}NO_3$   
FW: 381.6  
Purity:  $\geq 98\%$   
UV/Vis.:  $\lambda_{max}$ : 203 nm  
Supplied as: A 25 mg/ml solution in methyl acetate  
Storage:  $-20^{\circ}C$   
Stability:  $\geq 2$  years



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

### Laboratory Procedures

N-Oleoyl valine 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 valine in ethanol and DMSO is approximately 12 mg/ml and approximately 10 mg/ml in DMF.

N-Oleoyl valine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, N-oleoyl valine should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. N-Oleoyl valine 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 valine is an endogenous N-acyl amine that acts as an antagonist at the transient receptor potential vanilloid type 3 (TRPV3) receptor, which is involved in thermoregulation.<sup>1,2</sup> N-Oleoyl valine is increased in mice following cold exposure, up to at least 16 days.<sup>3</sup> Acute lung injury in mice increases the concentration of N-oleoyl valine in lung tissue.<sup>4</sup> N-acyl amines also promote mitochondrial uncoupling.<sup>3</sup>

### References

1. Raboune, S., Stuart, J.M., Leishman, E., *et al.* Novel endogenous N-acyl amides activate TRPV1-4 receptors, BV-2 microglia, and are regulated in brain in an acute model of inflammation. *Front. Cell. Neurosci.* **8**(195), 1-11 (2014).
2. Broad, L.M., Mogg, A.J., Eberle, E., *et al.* TRPV3 in drug development. *Pharmaceuticals* **9**(3), E55 (2016).
3. Long, J.Z., Svensson, K.J., Bateman, L.A., *et al.* The secreted enzyme PM20D1 regulates lipidated amino acid uncouplers of mitochondria. *Cell* **166**, 1-12 (2016).
4. Balakrishna, S., Song, W., Achanta, S., *et al.* TRPV4 inhibition counteracts edema and inflammation and improves pulmonary function and oxygen saturation in chemically induced acute lung injury. *Am. J. Physiol. Lung Cell. Mol. Physiol.* **307**(2), L158-L172 (2014).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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