

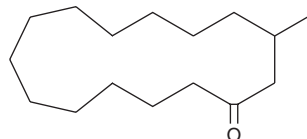
PRODUCT INFORMATION



Muscone

Item No. 16067

CAS Registry No.: 541-91-3
Formal Name: 3-methyl-cyclopentadecanone
Synonym: 3-Methylcyclopentadecanone
MF: C₁₆H₃₀O
FW: 238.4
Purity: ≥98%
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

Muscone 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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of muscone in these solvents is approximately 30 mg/ml.

Muscone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, muscone should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Muscone has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(±)-Muscone is an odoriferous constituent of musk, a glandular secretion originally collected from the male musk deer, that has found use both in the composition of perfumes and in traditional Chinese medicine practices.¹ (±)-Muscone has been shown to exhibit anti-inflammatory effects by reducing the expression of proinflammatory cytokines both *in vitro* and *in vivo*. In a model of vertebral end-plate degeneration, 25 μM (±)-muscone was shown to reverse IL-1β-induced upregulation of IL-1β, TNF-α, COX-2, inducible nitric oxide synthase, matrix metalloproteinase 13, aggrecanase 2, and nitric oxide.² It has also been reported to be both cardioprotective and neuroprotective during conditions of ischemia and to promote proliferation and differentiation of neural stem cells.³⁻⁵

References

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2. Liang, Q.-Q., Zhang, M., Zhou, Q., *et al.* Muscone protects vertebral end-plate degeneration by antiinflammatory property. *Clin. Orthop. Relat. Res.* **468(6)**, 1600-1610 (2010).
3. Wang, X., Meng, H., Chen, P., *et al.* Beneficial effects of muscone on cardiac remodeling in a mouse model of myocardial infarction. *Int. J. Mol. Med.* **34(1)**, 103-111 (2014).
4. Yu, L., Wang, N., Zhang, Y., *et al.* Neuroprotective effect of muscone on glutamate-induced apoptosis in PC12 cells via antioxidant and Ca²⁺ antagonism. *Neurochem. Int.* **70**, 10-21 (2014).
5. Si, Y.C., Li, Q., Xie, C.E., *et al.* Chinese herbs and their active ingredients for activating xue (blood) promote the proliferation and differentiation of neural stem cells and mesenchymal stem cells. *Chin. Med.* **9(1)**, 13 (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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