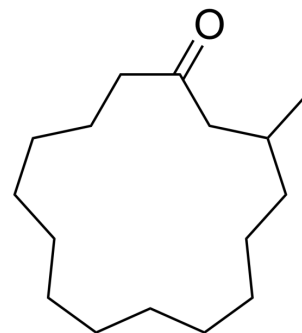


## Muscone

<b>Cat. No.:</b>	HY-N0633		
<b>CAS No.:</b>	541-91-3		
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>30</sub> O		
<b>Molecular Weight:</b>	238.41		
<b>Target:</b>	Interleukin Related; TNF Receptor; NF-κB; NOD-like Receptor (NLR); P-glycoprotein		
<b>Pathway:</b>	Immunology/Inflammation; Apoptosis; NF-κB; Membrane Transporter/Ion Channel		
<b>Storage:</b>	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (419.45 mM; Need ultrasonic)  
 H<sub>2</sub>O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.1945 mL	20.9723 mL	41.9445 mL
	5 mM	0.8389 mL	4.1945 mL	8.3889 mL
	10 mM	0.4194 mL	2.0972 mL	4.1945 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (10.49 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Muscone is the main active monomer of traditional Chinese medicine musk. Muscone inhibits NF-κB and NLRP3 inflammasome activation. Muscone remarkably decreases the levels of inflammatory cytokines (IL-1β, TNF-α and IL-6), and ultimately improves cardiac function and survival rate<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

NF-κB

NLRP3

IL-1β

IL-6

## In Vitro

Muscone significantly downregulates the levels of LPS-induced inflammatory cytokines and inhibits NF- $\kappa$ B and NLRP3 inflammasome activation in Bone marrow-derived macrophages (BMDMs). Muscone serves as a promising and effective drug for post-myocardial infarction (MI) treatment<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Cell Immunol. 2023 Mar 5.
- J Biochem Mol Toxicol. 2023 Jul 17;e23458.
- Research Square Preprint. 2023 Aug 3.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Du Y, et al. Muscone improves cardiac function in mice after myocardial infarction by alleviating cardiac macrophage-mediated chronic inflammation through inhibition of NF- $\kappa$ B and NLRP3 inflammasome. Am J Transl Res. 2018 Dec 15;10(12):4235-4246.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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