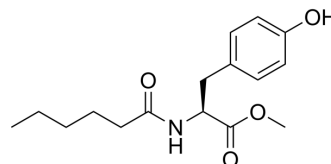


## MHP

<b>Cat. No.:</b>	HY-101572		
<b>CAS No.:</b>	1104874-94-3		
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>23</sub> NO <sub>4</sub>		
<b>Molecular Weight:</b>	293.36		
<b>Target:</b>	SphK		
<b>Pathway:</b>	Immunology/Inflammation		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



## SOLVENT & SOLUBILITY

### In Vitro

DMSO : ≥ 100 mg/mL (340.88 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.4088 mL	17.0439 mL	34.0878 mL
	5 mM	0.6818 mL	3.4088 mL	6.8176 mL
	10 mM	0.3409 mL	1.7044 mL	3.4088 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 (8.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (8.52 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (8.52 mM); Clear solution

## BIOLOGICAL ACTIVITY

### Description

MHP (Methyl caprooyl tyrosinate) is an activator of sphingosine kinase (SPHK1), and significantly stimulates CAMP mRNA and protein production. MHP (Methyl caprooyl tyrosinate) enhances antimicrobial defense and innate immunity<sup>[1]</sup>.

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

SphK1

### In Vitro

MHP (50-250 μM for 24 hours) increases CAMP mRNA levels in keratinocytes<sup>[1]</sup>.

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MHP (100  $\mu$ M for 24 hours) increases CAMP protein levels in keratinocytes<sup>[1]</sup>.

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

Cell Viability Assay<sup>[1]</sup>

Cell Line:	Keratinocytes
Concentration:	100 $\mu$ M
Incubation Time:	24 hours
Result:	Increased CAMP protein levels in keratinocytes.

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## REFERENCES

[1]. Jeong SK, et al. Sphingosine kinase 1 activation enhances epidermal innate immunity through sphingosine-1-phosphate stimulation of cathelicidin production. J Dermatol Sci. 2015 Sep;79(3):229-34.

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

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