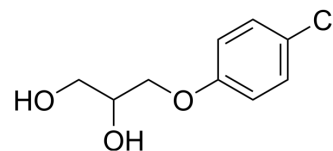


## Chlorphenesin

Cat. No.:	HY-A0133
CAS No.:	104-29-0
Molecular Formula:	C <sub>9</sub> H <sub>11</sub> ClO <sub>3</sub>
Molecular Weight:	202.63
Target:	Bacterial; Fungal
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (493.51 mM; Need ultrasonic)  
 H<sub>2</sub>O : ≥ 6.67 mg/mL (32.92 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.9351 mL	24.6755 mL	49.3510 mL
	5 mM	0.9870 mL	4.9351 mL	9.8702 mL
	10 mM	0.4935 mL	2.4676 mL	4.9351 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 (12.34 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (12.34 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (12.34 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Chlorphenesin is a reversible antigen-associated immunosuppressant. Chlorphenesin is an antibacterial and antifungal agent used in numerous eye care cosmetics<sup>[1]</sup>.

#### In Vitro

Chlorphenesin (0.01, 0.1, 0.3%; 30-min exposure) significantly reduces the activity of the Akt pathway in a dose-dependent manner in human meibomian gland epithelial cells (HMGECS)<sup>[2]</sup>.  
 Chlorphenesin (0.1, 0.3%; 24 hours) induces immortalized HMGECS (IHMGECS) rounding, atrophy, poor adherence, detachme and significantly reduces the number of IHMGECS<sup>[2]</sup>.

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

## REFERENCES

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[1]. H Y Whang, et al. Chlorphenesin: an antigen-associated immunosuppressant. Infect Immun. 1970 Jul;2(1):60-4.

[2]. Jingyi Wang, et al. Toxicity of the cosmetic preservatives parabens, phenoxyethanol and chlorphenesin on human meibomian gland epithelial cells. Exp Eye Res. 2020 Jul;196:108057.

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

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