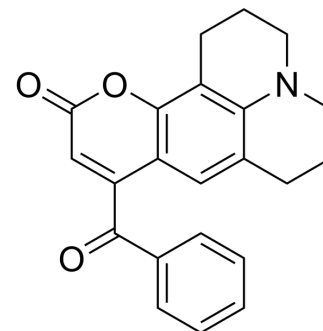


Coumberone

Cat. No.:	HY-D1341		
CAS No.:	878019-47-7		
Molecular Formula:	C ₂₂ H ₁₉ NO ₃		
Molecular Weight:	345.39		
Target:	Fluorescent Dye		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 16.67 mg/mL (48.26 mM); ultrasonic and warming and heat to 70°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.8953 mL	14.4764 mL	28.9528 mL
		5 mM	0.5791 mL	2.8953 mL	5.7906 mL
10 mM		0.2895 mL	1.4476 mL	2.8953 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.67 mg/mL (4.84 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Coumberone is a metabolic fluorogenic probe, and isoform-selective substrate for all AKR1C isoforms. Coumberone can be reduced by all four members of the AKR1C family to its fluorescent alcohol coumberol. Coumberone can be used for the research of AKR1C ^{[1][2]} .
In Vitro	Coumberone (30 μM; 24 hours; HCT116 cells) is an AKR1C3 substrate and demonstrates maximal rates at ~10 μM ^[1] . Coumberone (5 μM; 24 hours; COS-1 cells) can be used for the selective optical readout of each isoform, either AKR1C2 or AKR1C3 ^[2] . Coumberone (5 μM; 24 hours; IMR32 cells) enables real-time imaging of AKR1C induction ^[2] . Coumberone (80 hours; IMR-32 cells) metabolism is indeed increased. Coumberone exhibits 10-fold greater catalytic efficiency for AKR1C3 than AKR1C2 in vitro ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Immunofluorescence ^[2]

Cell Line:	IMR32 cells
Concentration:	5 μ M
Incubation Time:	24 hours
Result:	Enabled real-time imaging of AKR1C induction.

REFERENCES

- [1]. Jamieson SM, et al. A novel fluorometric assay for aldo-keto reductase 1C3 predicts metabolic activation of the nitrogen mustard prodrug PR-104A in human leukaemia cells. *Biochem Pharmacol.* 2014;88(1):36-45.
- [2]. Halim M, et al. Imaging induction of cytoprotective enzymes in intact human cells: coumberone, a metabolic reporter for human AKR1C enzymes reveals activation by panaxytriol, an active component of red ginseng. *J Am Chem Soc.* 2008;130(43):14123-14128.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA