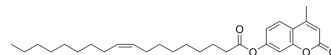


4-Methylumbelliferyl oleate

Cat. No.:	HY-117095
CAS No.:	18323-58-5
Molecular Formula:	C ₂₈ H ₄₀ O ₄
Molecular Weight:	440.61
Target:	Fluorescent Dye
Pathway:	Others
Storage:	-20°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 (226.96 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.2696 mL	11.3479 mL	22.6958 mL	
		5 mM	0.4539 mL	2.2696 mL	4.5392 mL	
		10 mM	0.2270 mL	1.1348 mL	2.2696 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (5.67 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (5.67 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.67 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	4-Methylumbelliferyl oleate is a fluorogenic substrate for acid and alkaline lipases. 4-Methylumbelliferyl oleate is cleaved by lipases, liberating 4-Methylumbelliferyl (Ex/Em=320/450 nm) ^{[1][2]} .
In Vitro	The inhibitory activity against pancreatic lipase was measured using 4-Methylumbelliferyl (4-MU) oleate as a substrate. The reaction mixture consisted of 50 μL 0.1 mM 4-MU oleate, 20 μL McIlvane buffer (0.1 M citrate-Na ₂ HPO ₄ , pH 7.4), and 5 μL of sample solution. Porcine pancreatic lipase (25 μL) was added to the reaction mixture and the final volume was adjusted to 0.1 ml. After the mixture was incubated at 37° for 10 min, the amount of 4-MU released by the lipase was measured using a fluorescence multi-detection reader at an excitation wavelength of 320 nm and an emission wavelength of 450 nm ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Zhang J, et al. Pancreatic lipase inhibitory activity of taraxacum officinale in vitro and in vivo. Nutr Res Pract. 2008 Winter;2(4):200-3.
- [2]. Koster JF, et al. Study of the hydrolysis of 4-methylumbelliferyl oleate by acid lipase and cholesteryl oleate by acid cholesteryl esterase in human leucocytes, fibroblasts and liver. Biochim Biophys Acta. 1980 Apr 18;618(1):98-105.
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Caution: Product has not been fully validated for medical applications. For research use only.

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