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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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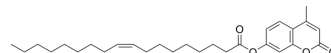
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4-Methylumbelliferyl oleate

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)				
	Preparing Stock Solutions	Mass	1 mg	5 mg	10 mg
		Solvent			
		Concentration			
		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	1. 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 2. 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 3. 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-Na₂ HPO₄, 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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