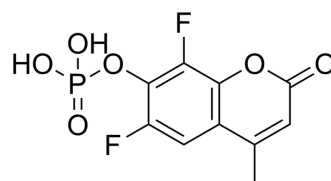


DiFMUP

Cat. No.:	HY-120166		
CAS No.:	214491-43-7		
Molecular Formula:	C ₁₀ H ₇ F ₂ O ₆ P		
Molecular Weight:	292.13		
Target:	Phosphatase		
Pathway:	Metabolic Enzyme/Protease		
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 : 50 mg/mL (171.16 mM; ultrasonic and warming and heat to 60°C)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.4231 mL	17.1157 mL	34.2313 mL
	5 mM	0.6846 mL	3.4231 mL	6.8463 mL
	10 mM	0.3423 mL	1.7116 mL	3.4231 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

DiFMUP is a fluorogenic substrate, and has been widely used for the continuous detection of phosphatase activities. DiFMUP is hydrolysis by a phosphatase results in the release of Xuorescent DIFMU, which can be easily followed in continuous mode by a Xuorescence reader^{[1][2]}.

In Vitro

DIFMUP (100 μM; 0-4 min) is hydrolyzed by protein tyrosine phosphatase 1B (PTP1B) in a time-dependent manner and the initial rate of the reaction velocity is increased with the enzyme concentration (30-600 ng/mL)^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Gee KR, et, al. Fluorogenic substrates based on fluorinated umbelliferones for continuous assays of phosphatases and beta-galactosidases. *Anal Biochem.* 1999 Aug 15;273(1):41-8.

[2]. Welte S, et, al. 6,8-Difluoro-4-methylumbiliferyl phosphate: a fluorogenic substrate for protein tyrosine phosphatases. *Anal Biochem.* 2005 Mar 1;338(1):32-8.

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

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