Product Data Sheet

Product Name: 4-Methylumbelliferyl phosphate (4-MUP)
Cat. No.: GC30523

Chemical Properties

Cas. No.	3368-04-5		
SMILES	O=C1C=C(C)C2=CC=C(OP(O)(O)=O)C=C2O1		
Formula	$C_{10}H_9O_6P$	M.Wt	256.15
Solubility	Water : 20.83 mg/mL (81.32 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

4-Methylumbelliferyl Phosphate (4-MUP) is a fluorogenic substrate for phosphatases, including acid and alkaline phosphatases.[1,2,3] It is converted to the fluorescent product 4-methylumbelliferone (4-MU), which has an emission maximum at 445-454 nm. The excitation maximum for 4-MU is pH-dependent: 330, 370, and 385 nm at pH 4.6, 7.4, and 10.4, respectively.[4]

1.Fernley, H.N., and Walker, P.G.Kinetic behaviour of calf-intestinal alkaline phosphatase with 4-methylumbelliferyl phosphateBiochem. J.97(1)95-103(1965) 2.Kohli, A.G., Kieler-Ferguson, H.M., Chan, D., et al.A robust and quantitative method for tracking liposome contents after intravenous administrationJ. Control Release17686-93(2014) 3.Remaley, A.T., Kuhn, D.B., Basford, R.E., et al.Leishmanial phosphatase blocks neutrophil O2 productionJ. Biol. Chem.259(18)11173-11175(1984) 4.Zhi, H., Wang, J., Wang, S., et al.Fluorescent properties of hymecromone and fluorimetric analysis of hymecromone in compound dantong capsuleJ. Spectrosc.147128(2013)

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA