

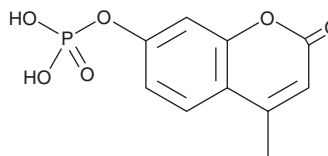
PRODUCT INFORMATION



4-Methylumbelliferyl Phosphate

Item No. 16645

CAS Registry No.: 3368-04-5
Formal Name: 4-methyl-7-(phosphonooxy)-2H-1-benzopyran-2-one
Synonyms: 7-hydroxy-4-Methylcoumarin Phosphate, 4-Methylumbelliferone Phosphate, 4-MUP, 4-MU Phosphate



MF: C₁₀H₉O₆P
FW: 256.2
Purity: ≥98%
Supplied as: A powder
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Description

4-Methylumbelliferyl Phosphate (4-MUP) is a fluorogenic substrate for phosphatases, including acid and alkaline phosphatases.¹⁻³ 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.¹

References

1. Fernley, H.N. and Walker, P.G. Kinetic behaviour of calf-intestinal alkaline phosphatase with 4-methylumbelliferyl phosphate. *Biochem. 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 administration. *J. Control Release* **176**, 86-93 (2014).
3. Remaley, A.T., Kuhn, D.B., Basford, R.E., *et al.* Leishmanial phosphatase blocks neutrophil O₂ production. *J. 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 capsule. *Journal of Spectroscopy* **2013**, 1-9 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM