

PRODUCT INFORMATION



Mycophenolic Acid methyl ester

Item No. 38397

CAS Registry No.: 31858-66-9

Formal Name: (4E)-6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-4-hexenoic acid, methyl ester

Synonyms: Methyl Mycophenolate, MPA methyl ester

MF: $C_{18}H_{22}O_6$

FW: 334.4

Purity: $\geq 98\%$

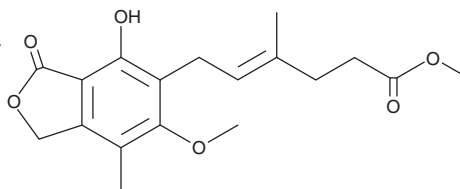
UV/Vis.: λ_{max} : 216 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Mycophenolic acid methyl ester is supplied as a crystalline solid. A stock solution may be made by dissolving the mycophenolic acid methyl ester in the solvent of choice, which should be purged with an inert gas. Mycophenolic acid methyl ester is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of mycophenolic acid methyl ester in ethanol is approximately 3 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Description

Mycophenolic acid methyl ester is an esterified form of the immunosuppressive microbial metabolite mycophenolic acid (Item No. 21716) that has been found in *P. spartinae*.¹ It inhibits transactivation of peroxisome proliferator-activated receptor γ (PPAR γ) induced by the PPAR γ agonist pioglitazone (Item Nos. 71745 | 22263 | 10028) in U2OS cells in a reporter assay when used at concentrations of 1 and 10 μM .² Mycophenolic acid methyl ester is cytotoxic against a panel of seven cancer cell lines ($\text{IC}_{50}\text{s} = 0.26\text{-}23.73 \mu\text{M}$).³ It inhibits tumor growth in an Ehrlich murine spontaneous adenocarcinoma model and decreases the production of antibodies against sheep red blood cells in mice when administered at a dose of 120 mg/kg.⁴ Mycophenolic acid methyl ester has been used as a precursor in the synthesis of mycophenolic acid β -D-glucuronide (Item No. 19078).⁵ It is also a potential impurity in commercial preparations of the mycophenolic acid prodrug mycophenolate mofetil.⁶

References

1. Elsebai, M.F. *Nat. Prod. Res.* **35**(9), 1504-1509 (2021).
2. Ubukata, M., Takamori, H., Ohashi, M., et al. *Bioorg. Med. Chem. Lett.* **17**(17), 4767-4770 (2007).
3. Silalai, P., Pruksakorn, D., Chairoungdua, A., et al. *Bioorg. Med. Chem. Lett.* **45**, 128135 (2021).
4. Oshugi, Y., Suzuki, S., and Takagaki, Y. *Cancer Res.* **36**(8), 2923-2927 (1976).
5. Jones, A.E., Wilson, H.K., Meath, P., et al. *Tetrahedron Lett.* **50**(35), 4973-4977 (2009).
6. Lu, Y.T., Qi, W.Z., Chen, Y.F., et al. *J. Sep. Sci.* **42**(16), 2650-2659 (2019).

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.

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