

Product Information

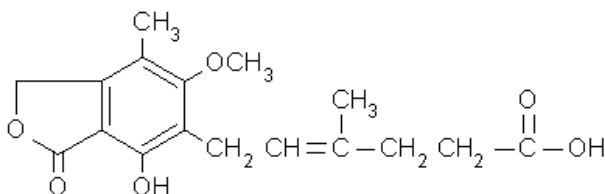
Mycophenolic acid

Catalog Numbers **M5255** and **M3536**

Storage Temperature 2–8 °C

CAS RN 24280-93-1

Synonyms: 6-(4-Hydroxy-6-methoxy-7-methyl-3-oxo-5-phthalanyl)-4-methyl-4-hexenoic acid,
6-(1,3-Dihydro-7-hydroxy-5-methoxy-4-methyl-1-oxoisobenzofuran-6-yl)-4-methyl-4-hexanoic acid



Molecular Formula: C₁₇H₂₀O₆

Molecular Weight: 320.34

Product Description

Mycophenolic acid (MPA), which is produced by *Penicillium brevis-compactum*, is a selective inhibitor of inosine monophosphate dehydrogenase, the rate-controlling enzyme for *de novo* biosynthesis of GMP.¹ As such it inhibits DNA synthesis in T and B lymphocytes.^{2,3} It serves as the active agent of the immunosuppressive drug Mycophenolate Mofetil (MMF).⁴ MPA induces monocyte differentiation and increases apoptosis in human lymphoid and monocytic cell lines.⁴ Mycophenolic acid is an immunosuppressive agent, which suppresses the cytokine-induced nitric oxide production in mouse and rat vascular endothelial cells.⁵

MPA is used to select transfected animal cells expressing the *Escherichia coli* gene for xanthine-guanine phosphoribosyl transferase (IMPDH),⁶ which is a practical dominant selectable marker that can be used for the selection of transfectants that express exogenous genes or cDNA in mammalian cells.⁷

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The product is soluble (50 mg/ml) in methanol, yielding a clear, colorless to a very faint yellow solution. If required, incubate at 40 °C for a few minutes to completely dissolve. It is also soluble in chloroform, dichloromethane, ethanol, and 0.1 N NaOH (10 mg/ml).

Following reconstitution it is recommended to sterilize by filtration through a 0.22 µm pore-size filter, aliquot, and freeze at –20 °C.

Mycophenolic acid, tissue culture tested (Catalog Number M3536) is recommended for use as a selection agent at a concentration of 25 µg/ml.

Storage/Stability

Store desiccated at 2–8 °C. The product, as supplied, is stable for 5 years when stored properly.

References

1. Nimmesgern, E. *et al.*, *J. Biol. Chem.*, **271**, 19421-19427 (1996).
2. Eugui, E.M. *et al.*, *Scand. J. Immunol.*, **33**, 161-173 (1991).
3. Gummert, J.F. *et al.*, *J. Pharmacol. Exp. Ther.*, **291**, 1100-1112 (1999).
4. Heinschink, A. *et al.*, *Clin. Chim. Acta*, **300**, 23-28 (2000).
5. Cohn, R.G. *et al.*, *Transplantation*, **68**, 411-18 (1999).
6. Senda, M. *et al.*, *Transplantation*, **60**, 1143-1148 (1995).
7. Mulligan, R.C., and Berg, P., *Proc. Natl. Acad. Sci. USA*, **78**, 2072-6 (1981).

NDH,PHC,MAM 10/12-1