

## Product Information

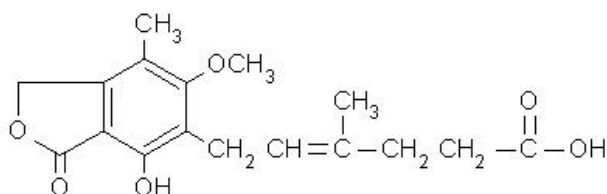
### Mycophenolic acid

Product 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: C<sub>17</sub>H<sub>20</sub>O<sub>6</sub>

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.<sup>1</sup> As such it inhibits DNA synthesis in T and B lymphocytes.<sup>2,3</sup> It serves as the active agent of the immunosuppressive drug Mycophenolate Mofetil (MMF).<sup>4</sup> MPA induces monocyte differentiation and increases apoptosis in human lymphoid and monocytic cell lines.<sup>4</sup> Mycophenolic acid is an immunosuppressive agent which suppresses the cytokine-induced nitric oxide production in mouse and rat vascular endothelial cells.<sup>5</sup>

MPA is used to select transfected animal cells expressing the *Escherichia coli* gene for xanthine-guanine phosphoribosyl transferase (IMPDH)<sup>6</sup> 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.<sup>7</sup>

#### 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. Solutions are stable for a few weeks at –20 °C.

Mycophenolic acid, tissue culture tested (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. Nimmegern, 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 02/06-1

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