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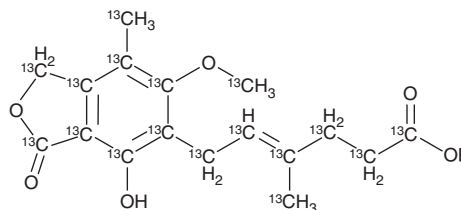
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PRODUCT INFORMATION



¹³C₁₇-Mycophenolic Acid Item No. 36359

CAS Registry No.: 1202866-92-9
Formal Name: 6-(4-hydroxy-6-(methoxy-¹³C)-7-(methyl-¹³C)-3-oxo-1,3-dihydroisobenzofuran-5-yl-¹³C₈)-4-(methyl-¹³C)hex-4-enoic-1,2,3,4,5,6-¹³C₆ acid
Synonym: ¹³C₁₇-MPA
MF: [¹³C]₁₇H₂₀O₆
FW: 337.2
Purity: ≥95%
Supplied as: A solution in acetonitrile
Storage: -20°C
Stability: ≥2 years
Item Origin: Synthetic



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

Description

¹³C₁₇-Mycophenolic acid is intended for use as an internal standard for the quantification of mycophenolic acid (Item No. 21716) by GC- or LC-MS. Mycophenolic acid is an immunosuppressive microbial metabolite that has been found in *P. brevicompactum*.^{1,2} It is also an active metabolite of mycophenolate mofetil (Item No. 13988) that is formed via carboxylesterase 1 (CES1) and CES2.³ Mycophenolic acid is an inhibitor of IMP dehydrogenase (IMPDH) type I and type II (IC₅₀s = 32 and 11 nM, respectively, in cell-free assays) and inhibits DNA synthesis in L strain mouse fibroblasts when used at concentrations ranging from 0.1 to 10 µg/ml.^{4,5} It is active against several strains of *C. albicans*, *C. parakrusei*, *C. tropicalis*, and *C. neoformans* (MICs = 3.9-31.25 µg/ml), as well as various strains of *S. aureus* (MICs = 31.25-125 µg/ml).² Mycophenolic acid (150 mg/kg) reduces splenomegaly in a mouse model of Friend virus-induced leukemia.⁶ It decreases the number of hemolytic plaque forming cells isolated from the spleen of mice immunized with sheep red blood cells (RBCs) when administered at doses ranging from 60 to 240 mg/kg.¹ Formulations containing mycophenolic acid have been used as immunosuppressive agents in the prevention of organ transplant rejection.

References

1. Mitsui, A. and Suzuki, S. Immunosuppressive effect of mycophenolic acid. *J. Antibiot. (Tokyo)* **22(8)**, 358-363 (1969).
2. Noto, T., Sawada, M., Ando, K., *et al.* Some biological properties of mycophenolic acid. *J. Antibiot. (Tokyo)* **22(4)**, 165-169 (1969).
3. Fujiyama, N., Miura, M., Kato, S., *et al.* Involvement of carboxylesterase 1 and 2 in the hydrolysis of mycophenolate mofetil. *Drug Metab. Dispos.* **38(12)**, 2210-2217 (2010).
4. Watkins, W.J., Chen, J.M., Cho, A., *et al.* Phosphonic acid-containing analogues of mycophenolic acid as inhibitors of IMPDH. *Bioorg. Med. Chem. Lett.* **16(13)**, 3479-3483 (2006).
5. Franklin, T.J. and Cook, J.M. The inhibition of nucleic acid synthesis by mycophenolic acid. *Biochem J.* **113(3)**, 515-524 (1969).
6. Williams, R.H., Lively, D.H., DeLong, D.C., *et al.* Mycophenolic acid: Antiviral and antitumor properties. *J. Antibiot. (Tokyo)* **21(7)**, 463-464 (1968).

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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