

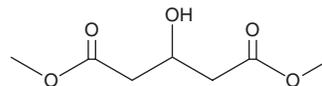
PRODUCT INFORMATION



3-Hydroxyglutaric Acid dimethyl ester

Item No. 22919

CAS Registry No.: 7250-55-7
Formal Name: 3-hydroxy-pentanedioic acid, 1,5-dimethyl ester
Synonyms: Dimethyl 3-HG, Dimethyl β -HG, Dimethyl 3-hydroxyglutarate, Dimethyl 3-hydroxypentanedioate, 3-HG dimethyl ester, β -HG dimethyl ester, NSC 30047
MF: $C_7H_{12}O_5$
FW: 176.2
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 211 nm
Supplied as: A neat oil
Storage: $-20^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

3-Hydroxyglutaric acid dimethyl ester is supplied as a neat oil. A stock solution may be made by dissolving the 3-hydroxyglutaric acid dimethyl ester in the solvent of choice, which should be purged with an inert gas. 3-Hydroxyglutaric acid dimethyl ester is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 3-hydroxyglutaric acid dimethyl ester in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 3-hydroxyglutaric acid dimethyl ester can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of 3-hydroxyglutaric acid dimethyl ester in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

3-Hydroxyglutaric acid dimethyl ester is a prochiral substrate and an esterified derivative of 3-hydroxyglutaric acid (Item No. 16334).¹ 3-Hydroxyglutaric acid dimethyl ester was used to characterize the ability of a lipase from *C. antarctica* to catalyze aminolysis of prochiral substrates, a process commonly utilized in the biosynthesis of statins.

Reference

1. Puertas, S., Rebolledo, F., and Gotor, V. Enantioselective enzymatic aminolysis and ammonolysis of dimethyl 3-hydroxyglutarate. Synthesis of (R)-4-amino-3-hydroxybutanoic acid. *J. Org. Chem.* **61**(17), 6024-6027 (1996).

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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