

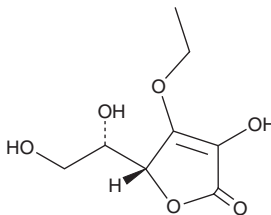
PRODUCT INFORMATION



3-O-ethyl-L-Ascorbic Acid

Item No. 34139

CAS Registry No.: 86404-04-8
Synonyms: 3-EtAA, 3-O-Ethylascorbic Acid
MF: C₈H₁₂O₆
FW: 204.2
Purity: ≥98%
UV/Vis.: λ_{max}: 246, 249 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

3-O-ethyl-L-Ascorbic acid is supplied as a solid. A stock solution may be made by dissolving the 3-O-ethyl-L-ascorbic acid in the solvent of choice, which should be purged with an inert gas. 3-O-ethyl-L-Ascorbic Acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 3-O-ethyl-L-ascorbic acid 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-O-ethyl-L-ascorbic acid can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 3-O-ethyl-L-ascorbic acid 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-O-ethyl-L-Ascorbic acid is an inhibitor of tyrosinase (IC₅₀s = 16.65 and 29.69 mM for the human and mushroom enzymes, respectively).^{1,2} It also scavenges DPPH radicals (IC₅₀ = 0.032 g/L).² Formulations containing 3-O-ethyl-L-ascorbic acid have been used in cosmetic products as skin-lightening agents.

References

1. Jeon, S.-H., Kim, K.-H., Koh, J.-U., *et al.* Inhibitory effects on L-dopa oxidation of tyrosinase by skin-whitening agents. *Bull. Korean Chem. Soc.* **26(7)**, 1135-1137 (2005).
2. Liao, W.C., Huang, Y.-T., Lu, L.-P., *et al.* Antioxidant ability and stability studies of 3-O-ethyl ascorbic acid, a cosmetic tyrosinase inhibitor. *J. Cosmet. Sci.* **69(4)**, 233-243 (2018).

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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