6α-Methylprednisolone 21-hemisuccinate
Item No. 11800

CAS Registry No.: 2921-57-5
Formal Name: 21-(3-carboxy-1-oxopropoxy)-11β,17-dihydroxy-6α-methyl-pregna-1,4-diene-3,20-dione
Synonyms: Methylprednisolone 21-succinate, MPS
MF: C_{26}H_{34}O_{8}
FW: 474.6
Purity: ≥98%
UV/Vis.: \( \lambda_{\text{max}} \): 243 nm
Supplied as: A crystalline 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

6α-Methylprednisolone 21-hemisuccinate is supplied as a crystalline solid. A stock solution may be made by dissolving the 6α-methylprednisolone 21-hemisuccinate in the solvent of choice, which should be purged with an inert gas. 6α-Methylprednisolone 21-hemisuccinate is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 6α-methylprednisolone 21-hemisuccinate in these solvents is approximately 5 and 3 mg/ml, respectively.

6α-Methylprednisolone 21-hemisuccinate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6α-methylprednisolone 21-hemisuccinate should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 6α-Methylprednisolone 21-hemisuccinate has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

6α-Methylprednisolone 21-hemisuccinate is a prodrug form of the synthetic glucocorticoid methylprednisolone (Item No. 15013). It is converted to methylprednisolone by carboxylesterase 2 (CES2).

Nanoliposomes containing 6α-methylprednisolone 21-hemisuccinate decreases disease severity in a rat model of adjuvant-induced arthritis. Formulations containing 6α-methylprednisolone 21-hemisuccinate have been used as anti-inflammatory agents and immunosuppressants with indications in allergic reactions and dermatologic, renal, gastrointestinal, respiratory, and ophthalmic diseases, as well as endocrine, hematologic, and rheumatic disorders.

References