Corticosterone
Item No. 16063

CAS Registry No.: 50-22-6
Formal Name: 11β,21-dihydroxy-pregn-4-ene-3,20-dione
Synonyms: 17-deoxy cortisol, 11β,21-DHP, NSC 9705, 11β,21-dihydroxy Progesterone
MF: C21H30O4
FW: 346.5
Purity: ≥98%
UV/Vis.: λ_{max}: 241 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

Corticosterone is supplied as a crystalline solid. A stock solution may be made by dissolving the corticosterone in the solvent of choice, which should be purged with an inert gas. Corticosterone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of corticosterone in these solvents is approximately 25 mg/ml.

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

Description

Corticosterone is a steroid hormone produced in the cortex of the adrenal glands that binds to both glucocorticoid and mineralocorticoid receptors.\(^1\) It is produced in response to ACTH (corticotropic hormone) and is the precursor to aldosterone synthesis.\(^2\) Since the production of glucocorticoids is increased by stress, it is often used as a biomarker of stress.\(^3\) Plasma corticosterone levels have a circadian variation and corticosterone may be important in the regulation of the sleep-wake cycle.\(^4,5\)

References