9-deoxy-9-methylene-16,16-dimethyl Prostaglandin E2 (potassium salt)

Item No. 14430

CAS Registry No.: 122576-55-0
Formal Name: 9-methylene-11α,15R-dihydroxy-16,16-dimethyl-prosta-5Z,13E-dien-1-oic acid, potassium salt
Synonyms: Metenprost potassium, U-46785b
MF: C23H37O4 • K
FW: 416.6
Purity: ≥98%
Stability: ≥6 months at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

9-deoxy-9-methylene-16,16-dimethyl prostaglandin E2 (metenprost) is a potent analog of prostaglandin E2 (PGE2) with an extended half life, in vivo. For long term storage, we suggest that metenprost potassium be stored as supplied at -20°C. It will be stable for at least six months.

Metenprost is supplied as a crystalline solid. A stock solution may be made by dissolving the metenprost in an organic solvent purged with an inert gas. Metenprost is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of metenprost in these solvents is approximately 50, 12.5, and 2 mg/ml, respectively.

Metenprost is supplied as the potassium salt to facilitate its uptake in aqueous solutions. Metenprost potassium is soluble in PBS (pH 7.2) at a concentration of approximately 50 mg/ml. Prior to performing biological experiments, the metenprost potassium can be added as the crystalline solid to the buffer of choice; metenprost is stable in aqueous solutions from pH 1 to 14. We recommend making a fresh preparation everyday.

In combination with various other PG derivatives, metenprost results in the termination of first trimester pregnancy in monkeys. A single intramuscular injection containing 0.5 mg of metenprost and 7.5 mg of 17-phenyl trinor PGF1α is very effective in terminating early pregnancy. This PG mixture is ineffective on monkeys in their third trimester of pregnancy. Metenprost, when compared to PGE2 and PGF1α, in monkey and rat, does not result in unwanted side effects such as fever or gastrointestinal problems.

References

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