

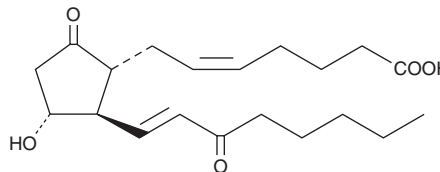
Product Information



15-keto Prostaglandin E₂ Lipid Maps MS Standard

Catalog No. 10007215

CAS Registry No.: 26441-05-4
Formal Name: 9,15-dioxo-11 α -hydroxy-prosta-5Z,13E-dien-1-oic acid
Synonym: 15-keto PGE₂
MF: C₂₀H₃₀O₅
FW: 350.5
Purity: \geq 99%
Stability: \geq 2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 15-keto prostaglandin E₂ (15-keto PGE₂) be stored as supplied at -20°C. It should be stable for at least two years.

15-keto PGE₂ is supplied as a crystalline solid. 15-keto PGE₂ is sparingly soluble in water but freely soluble in organic solvents such as ethanol, DMSO, or dimethyl formamide. The solubility of 15-keto PGE₂ in these solvents is at least 100 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 15-keto PGE₂ can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of 15-keto PGE₂ in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

15-keto PGE₂ is a metabolite of PGE₂ formed by 15-hydroxy PGDH.^{1,2} *In vivo*, 15-keto PGE₂ is essentially inactive. It has an attenuated affinity for the EP₄ and EP₂ receptors compared to PGE₂ (K_i = 2,600-15,000 nM for the inhibition of PGE₂ binding compared to a K_d = 1 nM for PGE₂).³

References

1. Hamberg, M. and Samuelsson, B. On the metabolism of prostaglandins E₁ and E₂ in man. *J. Biol. Chem.* **246**, 6713-6721 (1971).
2. Mak, O.T., Liu, Y., Tai, H. Purification and characterization of NAD⁺-dependent 15-hydroxyprostaglandin dehydrogenase from porcine kidney. *Biochim. Biophys. Acta* **1035**, 190-196 (1990).
3. Nishigaki, N., Negishi, M., Ichikawa, A. Two G_s-coupled prostaglandin E receptor subtypes, EP₂ and EP₄, differ in desensitization and sensitivity to the metabolic inactivation of the agonist. *Mol. Pharmacol.* **50**, 1031-1037 (1996).

Related Products

Prostaglandin E₂ - Cat. No. 14010 • 8-*iso*-15-keto Prostaglandin E₂ - Cat. No. 14390 • 15-keto Prostaglandin E₂ - Cat. No. 14720

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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