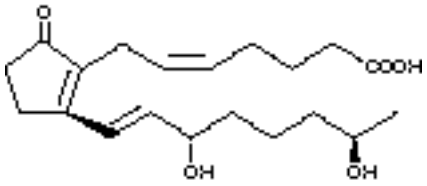
Product Information

19(R)-hydroxy Prostaglandin B_2

Item No. 11910

Formal Name: 9-oxo-15S,19R-dihydroxy-prosta-5Z,8(12),13E-trien-1-oic acid
Synonym: 19(R)-OH PGB_2
MF: $C_{20}H_{30}O_5$
FW: 350.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol
UV/Vis.: λ_{max}: 278 nm



Laboratory Procedures

For long term storage, we suggest that 19(R)-hydroxy Prostaglandin B_2 (19(R)-OH PGB_2) be stored as supplied at -20°C. It should be stable for at least one year.

19(R)-OH PGB_2 is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO or dimethyl formamide purged with an inert gas can be used. The solubility of 19(R)-OH PGB_2 in these solvents is approximately 50 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 19(R)-OH PGB_2 can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 19(R)-OH PGB_2 in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Base treatment of human seminal plasma extracts converts the 19-OH PGE compounds present into the corresponding PGB compounds generating strong conjugated dienone chromophores. This method has been employed in part to provide a rapid, UV-based analytical method for PGE quantitation. Due to its chemical stability and strong UV absorbance at 278 nm, 19(R)-OH PGB_2 is also used as an internal standard in extractions and HPLC to determine recovery of arachidonic acid metabolites.[1-3]

References

1. Antoine, C., Murphy, R.C., Henson, P.M., *et al.* Time-dependent utilization of platelet arachidonic acid by the neutrophil in formation of 5-lipoxygenase products in platelet-neutrophil co-incubations. *Biochim. Biophys. Acta* **1128**, 139-146 (1992).
2. Borgeat, P. and Picard, S. 19-Hydroxyprostaglandin B_2 as an internal standard for on-line extraction-high-performance liquid chromatography analysis of lipoxygenase products. *Anal. Biochem.* **171**, 283-289 (1988).
3. Surette, M.E., Odeimat, A., Palmantier, R., *et al.* Reverse-phase high-performance liquid chromatography analysis of arachidonic acid metabolites in plasma after stimulation of whole blood *ex vivo*. *Anal. Biochem.* **216**, 392-400 (1994).

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