

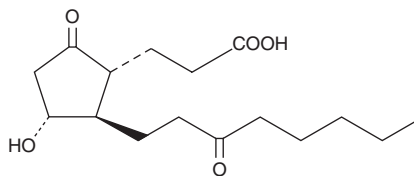
# Product Information



## 13,14-dihydro-15-keto-tetranor Prostaglandin E<sub>2</sub>

Catalog No. 13101

<b>CAS Registry No.:</b>	20675-85-8
<b>Formal Name:</b>	9,15-dioxo-11 $\alpha$ -hydroxy-2,3,4,5-tetranor-prostanoic acid
<b>Synonyms:</b>	13,14-dihydro-15-keto-tetranor PGE <sub>2</sub>
<b>MF:</b>	C <sub>16</sub> H <sub>26</sub> O <sub>5</sub>
<b>FW:</b>	298.4
<b>Purity:</b>	≥95%
<b>Stability:</b>	≥6 months at -20°C
<b>Supplied as:</b>	A solution in ethanol



### Laboratory Procedures

For long term storage, we suggest that 13,14-dihydro-15-keto-tetranor prostaglandin E<sub>2</sub> (13,14-dihydro-15-keto-tetranor PGE<sub>2</sub>) be stored as supplied at -20°C. It should be stable for at least six months.

13,14-dihydro-15-keto-tetranor PGE<sub>2</sub> 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 and dimethyl formamide purged with an inert gas can be used. The solubility of 13,14-dihydro-15-keto-tetranor PGE<sub>2</sub> 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. If an organic solvent-free solution of 13,14-dihydro-15-keto-tetranor PGE<sub>2</sub> is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 13,14-dihydro-15-keto-tetranor PGE<sub>2</sub> in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

A common metabolic pathway for several PGs, including PGE<sub>2</sub>, involves the reduction of the double bond between C-13 and C-14 and oxidation of the hydroxyl group at C-15, producing 13,14-dihydro-15-keto PGs. The removal of four carbons at the  $\alpha$ -terminus and oxidation of the terminal  $\omega$ -carbon produces the abundant urinary metabolites, including tetranor-PGEM.<sup>1</sup> 13,14-dihydro-15-keto-tetranor PGE<sub>2</sub> is a potential metabolite of PGE<sub>2</sub>. It would be produced from the known metabolite 13,14-dihydro-15-keto PGE<sub>2</sub> (Catalog No. 14650), which is known to have a short plasma half-life.<sup>2-4</sup>

### References

1. Hamberg, M. Inhibition of prostaglandin synthesis in man. *Biochem. Biophys. Res. Commun.* **49**, 720-726 (1972).
2. Bothwell, W., Verburg, M., Wynalda, M., *et al.* A radioimmunoassay for the unstable pulmonary metabolites of prostaglandin E<sub>1</sub> and E<sub>2</sub>: An indirect index of their *in vivo* disposition and pharmacokinetics. *J. Pharmacol. Exp. Ther.* **220**, 229-235 (1982).
3. Fitzpatrick, F.A., Aguirre, R., Pike, J.E., *et al.* The stability of 13,14-dihydro-15 keto-PGE<sub>2</sub>. *Prostaglandins* **19**, 917-931 (1980).
4. Granström, E., Hamberg, M., Hansson, G., *et al.* Chemical instability of 15-keto-13,14-dihydro-PGE<sub>2</sub>: The reason for low assay reliability. *Prostaglandins* **19**, 933-945 (1980).

### Related Products

13,14-dihydro-15-keto Prostaglandin E<sub>2</sub> - Cat. No. 14650 • tetranor-PGEM - Cat. No. 14840

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

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