

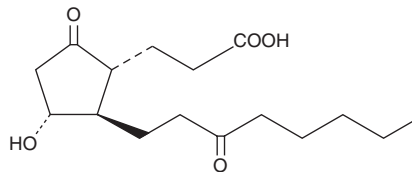
# PRODUCT INFORMATION



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

Item No. 13101

**CAS Registry No.:** 20675-85-8  
**Formal Name:** [1R-(1 $\alpha$ ,2 $\beta$ ,3 $\alpha$ )]-3-hydroxy-5-oxo-2-(3-oxooctyl)-cyclopentanepropanoic acid  
**Synonym:** 13,14-dihydro-15-keto-tetranor PGE<sub>2</sub>  
**MF:** C<sub>16</sub>H<sub>26</sub>O<sub>5</sub>  
**FW:** 298.4  
**Purity:**  $\geq$ 95%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:**  $\geq$ 2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

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

13,14-dihydro-15-keto-tetranor PGE<sub>2</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 13,14-dihydro-15-keto-tetranor PGE<sub>2</sub> should be diluted with the aqueous buffer of choice. 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.

### Description

A common metabolic pathway for several prostaglandins (PG), 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> (Item 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(3)**, 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(2)**, 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(6)**, 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(6)**, 933-945 (1980).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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