

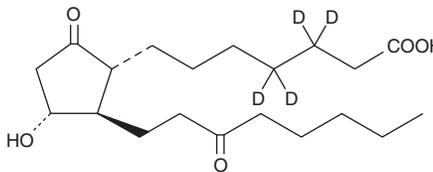
# PRODUCT INFORMATION



## 13,14-dihydro-15-keto Prostaglandin E<sub>1</sub>-d<sub>4</sub>

Item No. 9000288

<b>Formal Name:</b>	9,15-dioxo-11 $\alpha$ -hydroxy-prostan-1-oic-3,3,4,4-d <sub>4</sub> acid
<b>Synonyms:</b>	13,14-dh-15-k PGE <sub>1</sub> -d <sub>4</sub>
<b>MF:</b>	C <sub>20</sub> H <sub>30</sub> O <sub>5</sub> D <sub>4</sub>
<b>FW:</b>	358.5
<b>Chemical Purity:</b>	≥98% (13,14-dh-15-k PGE <sub>1</sub> )
<b>Deuterium Incorporation:</b>	≥99% deuterated forms (d <sub>1</sub> -d <sub>4</sub> ); ≤1% d <sub>0</sub>
<b>Supplied as:</b>	A solution in methyl acetate
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥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 Prostaglandin E<sub>1</sub>-d<sub>4</sub> (13,14-dh-15-k PGE<sub>1</sub>-d<sub>4</sub>) is intended for use as an internal standard for the quantification of 13,14-dh-15-k PGE<sub>1</sub> by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

13,14-dh-15-k PGE<sub>1</sub>-d<sub>4</sub> is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 13,14-dh-15-k PGE<sub>1</sub>-d<sub>4</sub> in these solvents is approximately 50 mg/ml

### Description

13,14-dh-15-k PGE<sub>1</sub> is a metabolite of PGE<sub>1</sub> with much reduced biological activity.<sup>1-3</sup> Steady state plasma concentrations are about 10 pg/ml.<sup>1</sup> 13,14-dh-15-k PGE<sub>1</sub> is a weak inhibitor of ADP-induced platelet aggregation in human PRP and washed platelets with IC<sub>50</sub> values of 54 and 200  $\mu$ M, respectively, compared to PGE<sub>1</sub> which has an IC<sub>50</sub> value of 40 nM.<sup>4</sup>

### References

1. Leonhardt, A., Krauss, M., Gieler, U., *et al.* *In vivo* formation of prostaglandin E<sub>1</sub> and prostaglandin E<sub>2</sub> in atopic dermatitis. *Br. J. Dermatol.* **136(3)**, 337-340 (1997).
2. Hamberg, M. and Samuelsson, B. On the metabolism of prostaglandins E<sub>1</sub> and E<sub>2</sub> in man. *J. Biol. Chem.* **246(22)**, 6713-6721 (1971).
3. Peskar, B.A., Cawello, W., Rogatti, W., *et al.* On the metabolism of prostaglandin E<sub>1</sub> administered intravenously to human volunteers. *J. Physiol. Pharmacol.* **42(3)**, 327-331 (1991).
4. Kobzar, G., Mardla, V., Järving, I., *et al.* Antiaggregating potency of E-type prostaglandins in human and rabbit platelets. *Proc. Estonian Acad. Sci. Chem.* **40(N3)**, 179-180 (1991).

#### 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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