



# SZABO SCANDIC

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## Produktinformation



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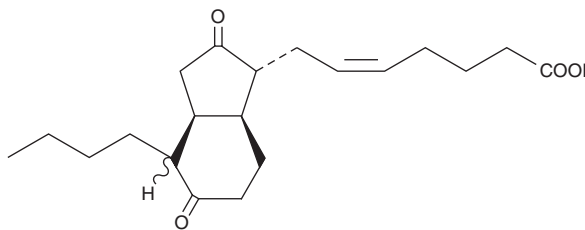
# PRODUCT INFORMATION



## Bicyclo Prostaglandin E<sub>2</sub>

Item No. 14530

CAS Registry No.: 74158-09-1  
Formal Name: 11-deoxy-13,14-dihydro-15-keto-11 $\beta$ ,16 $\xi$ -cycloprostaglandin E<sub>2</sub>  
Synonym: Bicyclo PGE<sub>2</sub>  
MF: C<sub>20</sub>H<sub>30</sub>O<sub>4</sub>  
FW: 334.5  
Purity:  $\geq$ 98%  
Stability:  $\geq$ 2 years at -20°C  
Supplied as: A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that bicyclo prostaglandin E<sub>2</sub> (bicyclo PGE<sub>2</sub>) be stored as supplied at -20°C. It should be stable for at least two years.

Bicyclo PGE<sub>2</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 DMSO, dimethyl formamide or ethanol can be used. To prevent oxidation of bicyclo PGE<sub>2</sub>, the solvent should be purged with an inert gas. The solubility of bicyclo PGE<sub>2</sub> in these solvents is approximately 25 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 aqueous solution of bicyclo PGE<sub>2</sub> is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of bicyclo PGE<sub>2</sub> in PBS (pH 7.2) is approximately 1.4 mg/ml. Store aqueous solutions of bicyclo PGE<sub>2</sub> on ice and use within 12 hours of preparation. Although the aqueous solutions of bicyclo PGE<sub>2</sub> may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

### Description

Bicyclo PGE<sub>2</sub> is a stable breakdown product of PGE<sub>2</sub> (Item No. 14010) and 13,14-dihydro-15-keto PGE<sub>2</sub> (Item No. 14650). Bicyclo PGE<sub>2</sub> is a stable, base-catalyzed transformation product of 13,14-dihydro-15-keto PGE<sub>2</sub>. 13,14-dihydro-15-keto PGE<sub>2</sub> itself is a metabolite of PGE<sub>2</sub> found in human plasma at a median level of 20-25 pg/ml.<sup>1,2</sup> Due to the inherent instability of 13,14-dihydro-15-keto PGE<sub>2</sub>, it is advisable to quantify it as bicyclo PGE<sub>2</sub> to estimate PGE<sub>2</sub> biosynthesis or metabolism *in vivo*.<sup>3,4</sup>

### References

1. 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**, 6713-6721 (1971).
2. 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**, 337-340 (1997).
3. Murphy, R.C. and Fitzgerald, G.A. Current approaches to estimation of eicosanoid formation *in vivo*. *Adv. Prostaglandin Thromboxane Leukotriene Res.* **22**, 341-348 (1994).
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).

#### 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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