

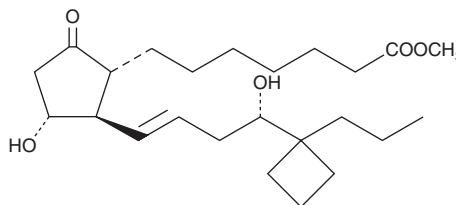
# PRODUCT INFORMATION



## Butaprost

Item No. 13740

**CAS Registry No.:** 69685-22-9  
**Formal Name:** 9-oxo-11 $\alpha$ ,16S-dihydroxy-17-cyclobutyl-prost-13E-en-1-oic acid, methyl ester  
**Synonyms:** 15-deoxy-16S-hydroxy-17-cyclobutyl PGE<sub>1</sub> methyl ester; TR 4979  
**MF:** C<sub>24</sub>H<sub>40</sub>O<sub>5</sub>  
**FW:** 408.6  
**Purity:** ≥98%  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Butaprost 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 butaprost in these solvents is approximately 25 mg/ml. Butaprost is stable for at least six months in these solvents if stored at -20°C.

Butaprost is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of butaprost should be diluted with the aqueous buffer of choice. Butaprost has a solubility of approximately 0.15 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Butaprost, a structural analog of PGE<sub>2</sub>, is a selective agonist for the EP<sub>2</sub> receptor subtype. EP<sub>2</sub> receptors are expressed on human neutrophils and on respiratory, vascular, and uterine smooth muscle.<sup>1,2</sup> Butaprost binds with about 1/10 the affinity of PGE<sub>2</sub> to the recombinant murine EP<sub>2</sub> receptor, and does not bind appreciably to the other murine EP receptors or the DP, TP, FP, and IP receptors.<sup>3</sup> The EC<sub>50</sub> for the stimulation of cAMP by butaprost in COS cells transfected with the human EP<sub>2</sub> receptor is about 5 μM, while the EC<sub>50</sub> for PGE<sub>2</sub> in this assay is about 43 nM.<sup>1</sup> Butaprost has frequently been used to pharmacologically define the EP receptor expression profile of various human and animal tissues and cells.<sup>4</sup>

### References

1. Regan, J.W., Bailey, T.J., Pepperl, D.J., *et al. Mol. Pharmacol.* **46**, 213-220 (1994).
2. Talpain, E., Armstrong, R.A., Coleman, R.A., *et al. Br. J. Pharmacol.* **114**, 1459-1465 (1995).
3. Kiriya, M., Ushikubi, F., Kobayashi, T., *et al. Br. J. Pharmacol.* **122**, 217-224 (1997).
4. Lawrence, R.A. and Jones, R.L. *Br. J. Pharmacol.* **105**, 817-824 (1992).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM