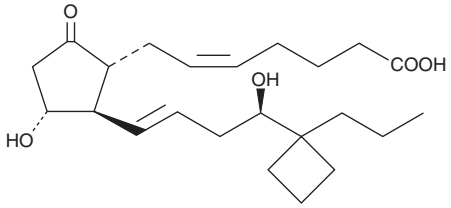
# PRODUCT INFORMATION

## CAY10408

*Item No. 13747*

**CAS Registry No.:** 212310-16-2
**Formal Name:** 9-oxo-11α,16R-dihydroxy-17-cyclobutyl-prosta-5Z,13E-dien-1-oic acid
**MF:** $C_{23}H_{36}O_5$
**FW:** 392.5
**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

CAY10408 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 CAY10408 in these solvents is approximately 15 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 CAY10408 is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of CAY10408 in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Butaprost is a structural analog of prostaglandin $E_2$ ($PGE_2$) with good selectivity for the $EP_2$ receptor subtype. Butaprost binds with about 1/10 the affinity of $PGE_2$ to the recombinant murine $EP_2$ receptor, and does not bind appreciably to any of the other murine EP receptors or DP, TP, FP, or IP receptors.[1] CAY10408 is a free acid, 2-series analog of butaprost. It is the less active C-16 epimer compared to the 16(S) isomer, which has the same stereochemistry as butaprost. Butaprost has frequently been used to pharmacologically define the EP receptor expression profile of various human and animal tissues and cells.[2] Since the majority of reports related to butaprost utilize the methyl ester derivative,[3,4] it may be some time before the precise pharmacology of the free acid compounds, like CAY10408, is reported.

### References


1. Kiriyama, M., Ushikubi, F., Kobayashi, T., *et al.* Ligand binding specificities of the eight types and subtypes of the mouse prostanoid receptors expressed in Chinese hamster ovary cells. *Br. J. Pharmacol.* **122**, 217-224 (1997).
2. Lawrence, R.A. and Jones, R.L. Investigation of the prostaglandin E (EP-) receptor subtype mediating relaxation of the rabbit jugular vein. *Br. J. Pharmacol.* **105**, 817-824 (1992).
3. Regan, J.W., Bailey, T.J., Pepperl, D.J., *et al.* Cloning of a novel human prostaglandin receptor with characteristics of the pharmacologically defined $EP_2$ subtype. *Mol. Pharmacol.* **46**, 213-220 (1994).
4. Talpain, E., Armstrong, R.A., Coleman, R.A., *et al.* Characterization of the PGE receptor subtype mediating inhibition of superoxide production in human neutrophils. *Br. J. Pharmacol.* **114**, 1459-1465 (1995).





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