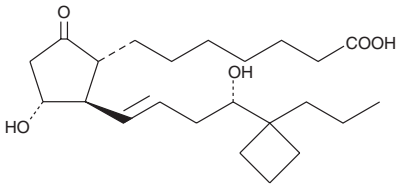
PRODUCT INFORMATION

Butaprost (free acid)

Item No. 13741

CAS Registry No.: 433219-55-7
Formal Name: 9-oxo-11α,16S-dihydroxy-17-cyclobutyl-prost-13E-en-1-oic acid
Synonyms: (±)-15-deoxy-16S-hydroxy-17-cyclobutyl PGE_1, 15-deoxy-16S-hydroxy-17-cyclobutyl PGE_1
MF: $C_{23}H_{38}O_5$
FW: 394.6
Purity: ≥95%
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 (free acid) 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 (DMF) purged with an inert gas can be used. The solubility of butaprost (free acid) in ethanol is approximately 50 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Butaprost (free acid) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of butaprost (free acid) should be diluted with the aqueous buffer of choice. The solubility of butaprost (free acid) in PBS (pH 7.2) is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Butaprost is an EP_2 selective agonist which has frequently been used to pharmacologically define the EP receptor expression profile of various human and animal tissues and cells.[1,2] Prostaglandin free acids generally bind to their cognate receptors with 10 to 100 times the affinity of the corresponding ester derivative. Consistent with this trend, butaprost binds to membranes from EP_2 receptor-transfected CHO cells with a K_i value of 2,400 nM, whereas butaprost (free acid) and CAY10399 (the 2-series congener of butaprost free acid) exhibit significantly lower K_i values of 73 and 92 nM, respectively.[3] Butaprost (free acid) is therefore another useful tool for characterizing EP receptor-mediated signaling events.

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(2)**, 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(4)**, 817-824 (1992).
3. Tani, K., Naganawa, A., Ishida, A., *et al.* Design and synthesis of a highly selective EP2-receptor agonist. *Bioorg. Med. Chem. Lett.* **11(15)**, 2025-2028 (2001).

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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