

PRODUCT INFORMATION



Rivenprost

Item No. 13618

CAS Registry No.: 256382-08-8

Formal Name: 4-[[[2R-[3R-hydroxy-2-[3S-hydroxy-4-[3-(methoxymethyl)phenyl]-1R-buten-1E-yl]-5-oxocyclopentyl]ethyl]thio]-butanoic acid, methyl ester

Synonyms: 16-(3-Methoxymethyl)phenyl- ω -tetranor-5-thiaPGE₁ methyl ester, ONO-4819, ONO-AE1-734

MF: C₂₄H₃₄O₆S

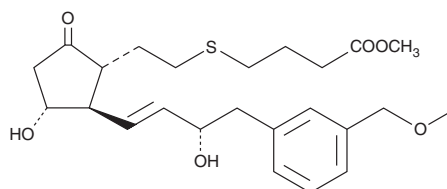
FW: 450.6

Purity: ≥98%

Supplied as: A 1 mg/ml solution in methyl acetate

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Rivenprost 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 rivenprost in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

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

Description

Rivenprost is a prodrug of the active free acid form, an agonist of the PGE₂ receptor subtype EP₄.^{1,2} Rivenprost (tested as the free acid) is selective for the EP₄ receptor over the EP₃, EP₂, and EP₁ receptor subtypes (K_s = 0.7, 56, 620, and >10,000 nM, respectively). It enhances bone morphogenic protein-induced increases in alkaline phosphatase activity, a marker of osteoblastic differentiation, in primary mouse calvarial osteoblasts when used at a concentration of 100 nM.³ Rivenprost decreases LPS-induced increases in plasma TNF- α levels in rats in a dose-dependent manner.¹ It decreases trabecular separation, as well as increases bone volume, in rats when administered at a dose of 10 μ g/kg.⁴ Rivenprost (3 and 10 mg/kg) increases proximal tibiae biomechanical strength in ovariectomized rats.⁵

References

1. Maruyama, T., Asada, M., Shiraishi, T., et al. *Bioorg. Med. Chem. Lett.* **11**(15), 2033-2035 (2001).
2. Miyamoto, M., Ito, H., Mukai, S., et al. *Osteoarthritis Cartilage* **11**(9), 644-652 (2003).
3. Nakagawa, K., Imai, Y., Ohta, Y., et al. *Bone* **41**(4), 543-548 (2007).
4. Ito, M., Nakayama, K., Konaka, A., et al. *Bone* **39**(3), 453-459 (2006).
5. Ninomiya, T., Hosoya, A., Hiraga, T., et al. *Eur. J. Pharmacol.* **650**(1), 396-402 (2011).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/10/2026

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