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- Expressversand

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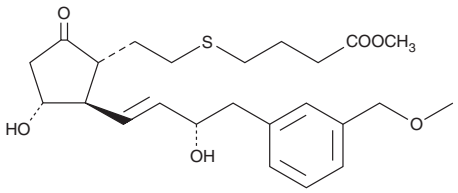
PRODUCT INFORMATION

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-thiaPGE_1 methyl ester, ONO-4819, ONO-AE1-734
MF: $C_{24}H_{34}O_6S$
FW: 450.6
Purity: ≥98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥1 year



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 PGE_2 receptor subtype EP_4.[1,2] Rivenprost (tested as the free acid) is selective for the EP_4 receptor over the EP_3, EP_2, and EP_1 receptor subtypes (K_is = 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 µg/kg.[4] Rivenprost (3 and 10 mg/kg) increases proximal tibiae biomechanical strength in ovariectomized rats.[5]

References

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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).

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