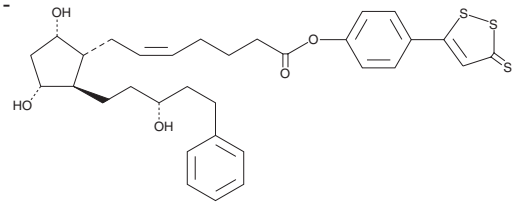
PRODUCT INFORMATION

ACS 67

Item No. 13619

CAS Registry No.:	1088434-86-9
Formal Name:	7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(3R)-3-hydroxy-5-phenylpentyl]cyclopentyl]-4-(3-thioxo-3H-1,2-dithiol-5-yl)phenyl ester, 5Z-heptenoic acid
MF:	$C_{32}H_{38}O_5S_3$
FW:	598.8
Purity:	≥95%
UV/Vis.:	λ_{max}: 210, 321, 434 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

ACS 67 is supplied as a crystalline solid. A stock solution may be made by dissolving the ACS 67 in the solvent of choice, which should be purged with an inert gas. ACS 67 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ACS 67 in these solvents is approximately 2, 20, and 30 mg/ml, respectively.

Description

Latanoprost is an F-series prostaglandin (PG) analog which has been approved for use as an ocular hypotensive drug for the treatment of glaucoma.[1] Latanoprost is an isopropyl ester, a prodrug form which is converted to latanoprost (free acid) by endogenous esterase enzymes. The free acid form is 200 times more potent than latanoprost as an FP receptor ligand for the human recombinant FP receptor.[2] ACS 67 is an analog of latanoprost (free acid) that contains a hydrogen sulfide releasing component conjugated to the latanoprost carboxyl group.[3] In glaucomatous pigmented rabbits, ACS 67 reduced intra-ocular pressure (IOP) more rapidly and to a greater extent than latanoprost (15 *versus* 25.5 mm Hg at four hours) at a dose of 0.005% for each compound.[3] ACS 67 also increased the levels of reduced glutathione and cGMP in the aqueous humor of glaucomatous pigmented rabbits better than latanoprost.[3]

References

1. Stjernschantz, J. and Resul, B. Phenyl substituted prostaglandin analogs for glaucoma treatment. *Drug. Future* **17(8)**, 691-704 (1992).
2. Abramovitz, M., Adam, M., Boie, Y., *et al.* The utilization of recombinant prostanoid receptors to determine the affinities and selectivities of prostaglandins and related analogs. *Biochim. Biophys. Acta* **1483(2)**, 285-293 (2000).
3. Perrino, E., Uliva, C., Lanzi, C., *et al.* New prostaglandin derivative for glaucoma treatment. *Bioorg. Med. Chem. Lett.* **19(6)**, 1639-1642 (2009).

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