

PRODUCT INFORMATION



16(R)-AFP 07 (free acid)

Item No. 10991

CAS Registry No.: 773825-80-2
Formal Name: 5Z-[3aR,3-difluorohexahydro-5R-hydroxy-4R-[3R-hydroxy-4S-methyl-1E-nonen-6aS-ynyl]-2H-cyclopenta[b]furan-2-ylidene]-pentanoic acid

MF: C₂₂H₃₀F₂O₅

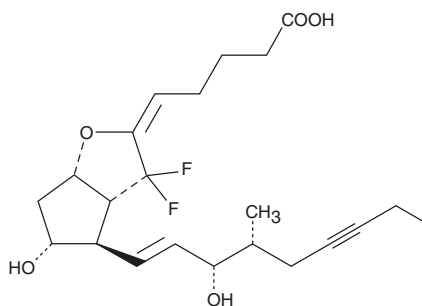
FW: 412.5

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

16(R)-AFP 07 (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 16(R)-AFP 07 (free acid) in ethanol and DMF is approximately 30 mg/ml and approximately 25 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 16(R)-AFP 07 (free acid) is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 16(R)-AFP 07 (free acid) in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Prostaglandin I₂ is an unstable prostanoid which, through the 'I prostanoid' (IP) receptor, inhibits platelet aggregation and promotes vasodilatation in pulmonary vascular beds. AFP 07 is a 7,7-difluoroprostacyclin derivative that acts as a selective and highly potent agonist for the IP receptor (K_i = 0.561 nM).¹ AFP 07 shows weaker affinity for EP receptors, with K_i values > 100 nM for EP₁₋₃ and > 10 nM for EP₄.^{1,2} 16(R)-AFP 07 is an epimer of AFP 07. Its biological properties, particularly through the IP and EP receptors, remain to be evaluated.

References

1. Chang, C.s., Negishi, M., Nakano, T., *et al.* 7,7-Difluoroprostacyclin derivative, AFP-07, a highly selective and potent agonist for the prostacyclin receptor. *Prostaglandins* **53(2)**, 83-90 (1997).
2. Jones, R.L. and Chan, K. Distinction between relaxations induced via prostanoid EP₄ and IP₁ receptors in pig and rabbit blood vessels. *Br. J. Pharmacol.* **134(2)**, 313-324 (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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