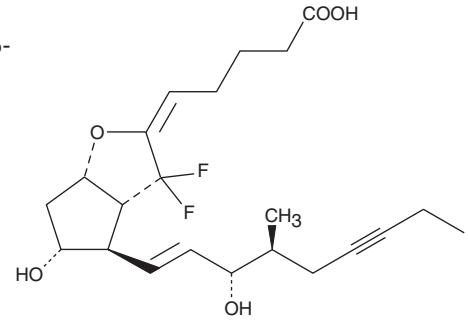
PRODUCT INFORMATION

AFP 07 (free acid)

Item No. 13626

CAS Registry No.:	788799-13-3
Formal Name:	5Z-[(3aR,4R,5R,6aS)-3,3-difluorohexahydro-5-hydroxy-4-[(1E,3S,4S)-3-hydroxy-4-methyl-1-nonen-6-ynyl]-2H-cyclopenta[b]furan-2-ylidene]-pentanoic acid
MF:	$C_{22}H_{30}F_2O_5$
FW:	412.5
Purity:	≥98%
Supplied as:	A 5 mg/ml 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

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 AFP 07 (free acid) in ethanol and DMF is approximately 30 mg/ml and approximately 25 mg/ml in DMSO.

AFP 07 (free acid) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of AFP 07 (free acid) should be diluted with the aqueous buffer of choice. The solubility of 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 I_2 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 of > 100 nM for $EP_{1\text{-}3}$ and > 10 nM for EP4.[1] In piglet and rabbit saphenous veins, which express both IP and EP_4, the EP_4 antagonist AH 23848 reduces AFP 07-mediated relaxation, suggesting that AFP 07 activates EP_4 as well as IP, particularly when both receptors are present.[2]

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 EP_4 and IP_1 receptors in pig and rabbit blood vessels. *Br. J. Pharmacol.* **134(2)**, 313-324 (2001).

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