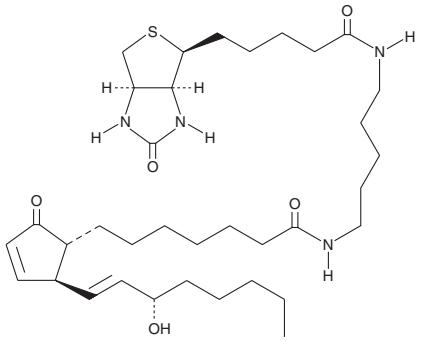
PRODUCT INFORMATION

Prostaglandin A_1-biotin

Item No. 10013

Formal Name:	N-9-oxo-15S-hydroxy-prosta-10,13E-dien-1-oyl-N'-biotinoyl-1,6-diaminopentane
Synonym:	PGA_1-biotin
MF:	$C_{35}H_{58}N_4O_5S$
FW:	646.9
Purity:	≥95%
Stability:	≥1 year at -20°C
Supplied as:	A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that prostaglandin A_1-biotin (PGA_1-biotin) be stored as supplied at -20˚C. It should be stable for at least one year.

PGA_1-biotin is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of PGA_1-biotin in these solvents is approximately 50, 25, and 50 mg/ml, respectively.

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 PGA_1-biotin is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of PGA_1-biotin in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGA_1 is one of the cyclopentenone prostaglandins, which have well documented antimitotic and antiproliferative effects.[1,2] The activity of the compounds in this class, which includes prostaglandins in both the A- and J-series, may result from changes in gene expression and the interaction with non-classical (*i.e.*, non-G protein-coupled receptor) pathways. PGA_1-biotin is an affinity probe which allows PGA_1 to be detected through an interaction with the biotin ligand. PGA_1-biotin was designed to allow PGA_1 to be detected in complexes with nucleic acid or protein binding partners. It is thus a tool to be used in the general elucidation of the mechanism of action of the cyclopentenone prostaglandins.

References

1. Bregman, M.D. and Meyskens, F.L., Jr. Inhibition of human malignant melanoma colony-forming cells *in vitro* by prostaglandin A_1. *Cancer Res.* **43**, 1642-1645 (1983).
2. Lacal, P.M., Amici, C., Bonmassar, E., *et al.* Effects of cyclopentenone prostaglandins on myeloid cells during early infection with HTLV-I. II. Regulation of synthesis of inducible p72 heat shock protein. *J. Pharmacol. Exp. Ther.* **271**, 1096-1102 (1994).

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