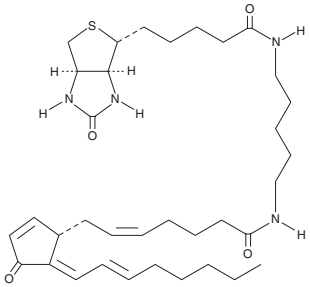
PRODUCT INFORMATION

15-deoxy-$\Delta^{12,14}$-Prostaglandin J_2-biotin

Item No. 10141

Formal Name:	N-11-oxo-prosta-5Z,9,12E,14E-tetraen-1-oyl-N'-biotinoyl-1,5-diaminopentane
Synonym:	15-deoxy-$\Delta^{12,14}$-PGJ_2-biotin
MF:	$C_{35}H_{54}N_4O_4S$
FW:	626.9
Purity:	≥98%
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

15-deoxy-$\Delta^{12,14}$-Prostaglandin J_2-biotin (15-deoxy-$\Delta^{12,14}$-PGJ_2-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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 15-deoxy-$\Delta^{12,14}$-PGJ_2-biotin in these solvents is approximately 20 mg/ml.

15-deoxy-$\Delta^{12,14}$-PGJ_2-biotin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 15-deoxy-$\Delta^{12,14}$-PGJ_2-biotin should be diluted with the aqueous buffer of choice. The solubility of 15-deoxy-$\Delta^{12,14}$-PGJ_2-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

15-deoxy-$\Delta^{12,14}$-PGJ_2 (Item No. 18570) is one of the cyclopentenone PGs, which have documented metabolic (peroxisome proliferator-activated receptor γ-activating), antimitotic, and antiproliferative effects.[1-3] The activity of the compounds in this class, which includes PGs 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. 15-deoxy-$\Delta^{12,14}$-PGJ_2-biotin is an affinity probe which allows 15-deoxy-$\Delta^{12,14}$-PGJ_2 to be detected through an interaction with the biotin ligand. 15-deoxy-$\Delta^{12,14}$-PGJ_2-biotin was designed to allow 15-deoxy-$\Delta^{12,14}$-PGJ_2 to be detected in complexes with nuclear receptors and/or 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 PGs.

References

1. Krakoff, L.R., Vlachakis, N., Mendlowitz, M., *et al.* Differential effect of prostaglandin A_1 in hypertensive patients with low, normal, and high renin. *Clin. Sci. Mol. Med.* **2**, 311s-313s (1975).
2. Kikuchi, Y., Kita, T., Hirata, J., *et al.* Preclinical studies of antitumor prostaglandins by using human ovarian cancer cells. *Cancer. Metast. Rev.* **13(3-4)**, 309-315 (1994).
3. Mueller, E., Drori, S., Aiyer, A., *et al.* Genetic analysis of adipogenesis through peroxisome proliferator-activated receptor γ isoforms. *J. Biol. Chem.* **277(44)**, 41925-41930 (2002).

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