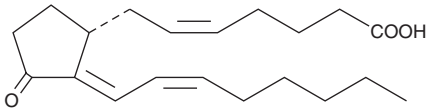
PRODUCT INFORMATION

CAY10410

Item No. 18590

CAS Registry No.:	596104-94-8
Formal Name:	11-oxo-prosta-5Z,12E,14Z-trien-1-oic acid
Synonyms:	9,10-dihydro-15-deoxy-$\Delta^{12,14}$-PGJ_2, 9,10-dihydro-15-deoxy-$\Delta^{12,14}$- Prostaglandin J_2
MF:	$C_{20}H_{30}O_3$
FW:	318.5
Purity:	≥98% (mixture of isomers)
UV/Vis.:	λ_{max}: 293 nm
Supplied as:	A 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

CAY10410 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 purged with an inert gas can be used. The solubility of CAY10410 in these solvents is approximately 75, 20, and 100 mg/ml, respectively.

CAY10410 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of CAY10410 should be diluted with the aqueous buffer of choice. The solubility of CAY10410 in PBS (pH 7.2) is approximately 2.7 mg. We do not recommend storing the aqueous solution for more than one day.

Description

CAY10410 is an analog of prostaglandin D_2/prostaglandin J_2 (PGD2/PGJ2) with structural modifications intended to give it PPARγ ligand activity and resistance to metabolism. 15-deoxy-$\Delta^{12,14}$-PGJ_2 has been shown to be a potent ligand for PPARγ.[1] Metabolism of the cyclopentenone prostaglandins PGA_2, PGJ2, and Δ^{12}-PGJ_2 occurs *via* glutathione addition across the α,β unsaturated enone.[2] CAY10410 was designed as an analog of the PPARγ-binding prostaglandins which could not undergo this conjugation reaction. In human neuroblastoma SH-SY5Y cells, CAY10410 was not cytotoxic at up to 25 µM. It also failed to covalently modify thioredoxin or induce oxidative stress at 50 µM.[3]

References

1. Forman, B.M., Tontonoz, P., Chen, J., *et al.* 15-Deoxy-$\Delta^{12,14}$-prostaglandin J_2 is a ligand for the adipocyte determination factor PPARγ. *Cell* **83(5)**, 803-812 (1995).
2. Atsmon, J., Sweetman, B.J., Baertschi, S.W., *et al.* Formation of thiol conjugates of 9-deoxy-Δ^9,Δ^{12}(*E*)-prostaglandin D_2 and Δ^{12}(*E*)-prostaglandin D_2. *Biochemistry* **29(5)**, 3760-3765 (1990).
3. Shibata, T., Yamada, T., Ishii, T., *et al.* Thioredoxin as a molecular target of cyclopentenone prostaglandins. *J. Biol. Chem.* **278(28)**, 26046-26054 (2003).

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