

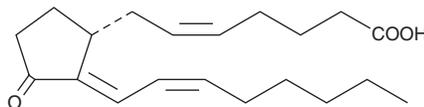
# PRODUCT INFORMATION



## 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<sub>2</sub>,  
9,10-dihydro-15-deoxy- $\Delta^{12,14}$ -  
Prostaglandin J<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>3</sub>  
**FW:** 318.5  
**Purity:** ≥98% (mixture of isomers)  
**UV/Vis.:** λ<sub>max</sub>: 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<sub>2</sub>/prostaglandin J<sub>2</sub> (PGD<sub>2</sub>/PGJ<sub>2</sub>) with structural modifications intended to give it PPAR $\gamma$  ligand activity and resistance to metabolism. 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub> has been shown to be a potent ligand for PPAR $\gamma$ .<sup>1</sup> Metabolism of the cyclopentenone prostaglandins PGA<sub>2</sub>, PGJ<sub>2</sub>, and  $\Delta^{12}$ -PGJ<sub>2</sub> occurs via glutathione addition across the  $\alpha,\beta$  unsaturated enone.<sup>2</sup> CAY10410 was designed as an analog of the PPAR $\gamma$ -binding prostaglandins which could not undergo this conjugation reaction. In human neuroblastoma SH-SY5Y cells, CAY10410 was not cytotoxic at up to 25  $\mu$ M. It also failed to covalently modify thioredoxin or induce oxidative stress at 50  $\mu$ M.<sup>3</sup>

### References

1. Forman, B.M., Tontonoz, P., Chen, J., *et al.* 15-Deoxy- $\Delta^{12,14}$ -prostaglandin J<sub>2</sub> is a ligand for the adipocyte determination factor PPAR $\gamma$ . *Cell* **83(5)**, 803-812 (1995).
2. Atsmon, J., Sweetman, B.J., Baertschi, S.W., *et al.* Formation of thiol conjugates of 9-deoxy- $\Delta^9,\Delta^{12}(E)$ -prostaglandin D<sub>2</sub> and  $\Delta^{12}(E)$ -prostaglandin D<sub>2</sub>. *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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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