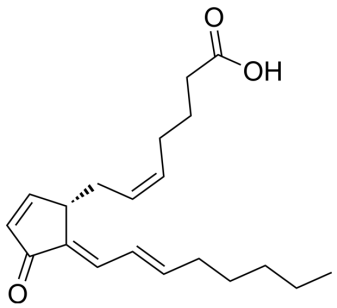
15-Deoxy-Δ-12,14-prostaglandin J2

Cat. No.:	HY-108568
CAS No.:	87893-55-8
Molecular Formula:	$C_{20}H_{28}O_3$
Molecular Weight:	316.43
Target:	Endogenous Metabolite; PPAR
Pathway:	Metabolic Enzyme/Protease; Cell Cycle/DNA Damage; Vitamin D Related/Nuclear Receptor
Storage:	Solution, -20°C, 2 years



BIOLOGICAL ACTIVITY

Description	15-Deoxy-Δ-12,14-prostaglandin J2 (15d-PGJ2) is a cyclopentenone prostaglandin and a metabolite of PGD2. 15-Deoxy-Δ-12,14-prostaglandin J2 is a selective PPARγ (EC_{50} of 2 μM) and a covalent PPARδ agonist. 15-Deoxy-Δ-12,14-prostaglandin J2 promotes efficient differentiation of C3H10T1/2 fibroblasts to adipocytes with an EC_{50} of 7 μM[1][2].		
IC_{50} & Target	PPARγ 2 μM (EC50)	PPARδ	Human Endogenous Metabolite
In Vitro	15-Deoxy-Δ12,14-PGJ2 (15d-PGJ2) is a cyclopentenone prostaglandin that features an electrophilic, α, β-unsaturated ketone (an enone) in the cyclopentenone ring. 15-Deoxy-Δ-12,14-prostaglandin J2 is one of the cyPGs whose functions in inflammation, cell proliferation, survival, and apoptosis have been documented. 15-Deoxy-Δ-12,14-prostaglandin J2 activates PPARδ in a dose-dependent manner. 15-Deoxy-Δ-12,14-prostaglandin J2 activates PPARδ's transcriptional activity through formation of a covalent adduct between its endocyclic enone at C9 and Cys249 in the receptor's ligand-binding domain[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.		

CUSTOMER VALIDATION

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REFERENCES

[1]. Reddy AT, et al. Identification and Molecular Characterization of Peroxisome Proliferator-Activated Receptor δ as a Novel Target for Covalent Modification by 15-Deoxy-Δ12,14-prostaglandin J2. CS Chem Biol. 2018 Dec 21;13(12):3269-3278.

[2]. Kliewer SA1, et al. A prostaglandin J2 metabolite binds peroxisome proliferator-activated receptor gamma and promotes adipocyte differentiation. Cell. 1995 Dec 1;83(5):813-9.

Caution: Product has not been fully validated for medical applications. For research use only.

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