SZABO SCANDIC

Part of Europa Biosite

# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


**SZABO-SCANDIC HandelsgmbH**

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

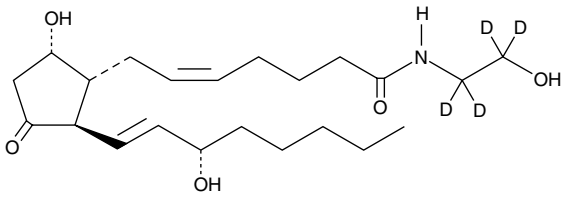
linkedin.com/company/szaboscandic

# Product Information

## Prostaglandin $D_2$ Ethanolamide-$d_4$

*Item No. 9001413*

**Formal Name:** N-(2-hydroxyethyl)-11-oxo-9α,15S-dihydroxy-prosta-5Z,13E-dien-1-amide-$d_4$
**Synonyms:** $PGD_2$-EA-$d_4$, Prostamide $D_2$-$d_4$
**MF:** $C_{22}H_{33}D_4NO_5$
**FW:** 399.6
**Chemical Purity:** ≥95% $PGD_2$-EA
**Deuterium Incorporation:** ≥99% deuterated forms ($d_1$-$d_4$); ≤1% $d_0$
**Stability:** ≥1 year at -20°C
**Supplied as:** A solution in ethanol




### Laboratory Procedures

Prostaglandin $D_2$ ethanolamide-$d_4$ ($PGD_2$-EA-$d_4$) contains four deuterium atoms. It is intended for use as an internal standard for the quantification of $PGD_2$-EA by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that $PGD_2$-EA-$d_4$ be stored as supplied at -20°C. It should be stable for at least one year.

$PGD_2$-EA-$d_4$ 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 (DMF) purged with an inert gas can be used. The solubility of $PGD_2$-EA-$d_4$ in ethanol is approximately 12.5 mg/ml and approximately 8.3 mg/ml in DMSO and DMF.

$PGD_2$-EA-$d_4$ is used as an internal standard for the quantification of $PGD_2$-EA by stable isotope dilution MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

$PGD_2$-EA is a bioactive lipid produced by the sequential metabolism of anandamide (arachidonoyl ethanolamide) by cyclooxygenase (COX) enzymes, in particular by COX-2, and PGD synthase.[1-3] The biosynthesis of $PGD_2$-EA from anandamide can also be increased when anandamide metabolism is diminished by deletion of fatty acid amide hydrolase.[4] $PGD_2$-EA is inactive against recombinant prostanoid receptors, including the D prostanoid receptor.[5] It increases the frequency of miniature inhibitory postsynaptic currents in primary cultured hippocampal neurons, an effect which is the opposite of that induced by anandamide.[3] $PGD_2$-EA also induces apoptosis in colorectal carcinoma cell lines.[2]

### References


1. Kozak, K.R., Crews, B.C., Morrow, J.D., *et al.* Metabolism of the endocannabinoids, 2-arachidonylgycerol and anandamide, into prostaglandin, thromboxane, and prostacyclin glycerol esters and ethanolamides. *J. Biol. Chem.* **277(47)**, 44877-44885 (2002).
2. Patsos, H.A., Hicks, D.J., Dobson, R.R.H., *et al.* The endogenous cannabinoid, anandamide, induces cell death in colorectal carcinoma cells: A possible role for cyclooxygenase 2. *Gut* **54(12)**, 1741-1750 (2005).\
3. Sang, N., Zhang, J., and Chen, C. $PGE_2$ glycerol ester, a COX-2 oxidative metabolite of 2-arachidonoyl glycerol, modulates inhibitory synaptic transmission in mouse hippocampal neurons. *J. Physiol.* **572**, 735-745 (2006).
4. Weber, A., Ni, J., Ling, K.-H.J., *et al.* Formation of prostamides from anandamide in FAAH knockout mice analyzed by HPLC with tandem mass spectrometry. *J. Lipid Res.* **45**, 757-763 (2004).
5. Matias, I., Chen, J., De Petrocellis, L., *et al.* Prostaglandin ethanolamides (prostamides): *In vitro* pharmacology and metabolism. *J. Pharmacol. Exp. Ther.* **309(2)**, 745-757 (2004).


### Related Products

For a list of related products please visit: www.caymanchem.com/catalog/9001413




**Cayman Chemical**

**Mailing address**
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

**Phone**
(800) 364-9897
(734) 971-3335

**Fax**
(734) 971-3640

**E-Mail**
custserv@caymanchem.com

**Web**
www.caymanchem.com