

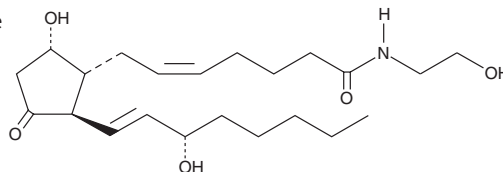
PRODUCT INFORMATION



Prostaglandin D₂ Ethanolamide

Item No. 12012

CAS Registry No.: 398138-28-8
Formal Name: N-(2-hydroxyethyl)-11-oxo-9 α ,15S-dihydroxy-prosta-5Z,13E-dien-1-amide
Synonyms: PGD₂-EA, Prostamide D₂
MF: C₂₂H₃₇NO₅
FW: 395.5
Purity: \geq 96%
Supplied as: A solution in ethanol
Storage: -80°C
Stability: \geq 2 years



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

Laboratory Procedures

Prostaglandin D₂ ethanolamide (PGD₂-EA) 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 PGD₂-EA in these solvents is approximately 8.3 mg/ml

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of PGD₂-EA is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of PGD₂-EA in PBS, pH 7.2, is approximately 2.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGD₂-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 PGD₂-EA from anandamide can also be increased when anandamide metabolism is diminished by deletion of fatty acid amide hydrolase.⁴ PGD₂-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 PGD₂-EA also induces apoptosis in colorectal carcinoma cell lines.²

References

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2. Patsos, H.A., Hicks, D.J., Dobson, R.R.H., et al. *Gut* **54**(12), 1741-1750 (2005).
3. Sang, N., Zhang, J., and Chen, C. *J. Physiol.* **572**, 735-745 (2006).
4. Weber, A., Ni, J., Ling, K.-H.J., et al. *J. Lipid Res.* **45**, 757-763 (2004).
5. Matias, I., Chen, J., De Petrocellis, L., et al. *J. Pharmacol. Exp. Ther.* **309**(2), 745-757 (2004).

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.

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