

PRODUCT INFORMATION



tetranor-PGDM

Item No. 12850

CAS Registry No.: 70803-91-7

Formal Name: 9 α -hydroxy-11,15-dioxo-13,14-dihydro-2,3,4,5-tetranor-prostan-1,20-dioic acid

Synonyms: tetranor-PGD Metabolite, tetranor-Prostaglandin D Metabolite

MF: C₁₆H₂₄O₇

FW: 328.4

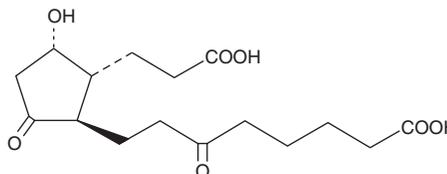
Purity: \geq 90%

Supplied as: A 100 μ g/ml solution in methanol

Storage: -80°C

Stability: \geq 1 year

Special Conditions: tetranor-PGDM is very unstable and should be placed on ice during laboratory use and returned to -80°C as quickly as possible. tetranor-PGDM decomposes rapidly when concentrated or stored in the absence of solvent.



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

Laboratory Procedures

tetranor-PGDM is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol 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 tetranor-PGDM in these solvents is approximately 50 mg/ml.

tetranor-PGDM is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methanolic solution of tetranor-PGDM should be diluted with the aqueous buffer of choice. The solubility of tetranor-PGDM in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Prostaglandin D₂ (PGD₂; Item No. 12010) is synthesized by hematopoietic-type PGD-synthase (H-PGDS) in mast cells and is released in large quantities during allergic and asthmatic anaphylaxis.¹ PGD₂ is also produced in the brain by lipocalin-PGDS also known as b-trace.^{2,3} In the brain, PGD₂ produces normal physiological sleep and lowering of body temperature.^{2,3} Further pharmacological actions include inhibition of platelet aggregation and relaxation of vascular smooth muscle.⁴ tetranor-PGDM is a major metabolite of PGD₂ that is detectable in human and mouse urine.⁵ The levels of tetranor-PGDM and 2,3-dinor-11 β -PGF_{2 α} (Item No. 16530), a related PGD₂ metabolite, in human urine were found to be 1.5 \pm 0.3 and 0.6 \pm ng/mg creatinine, respectively. tetranor-PGDM was detected in murine urine at a level of 8.1 \pm 1.3 ng/mg creatinine.⁵

References

1. Roberts, L.J., II and Sweetman, B.J. *Prostaglandins* **30**(3), 383-400 (1985).
2. Hayaishi, O. *J. Biol. Chem.* **263**(29), 14593-14596 (1988).
3. Onoe, H., Ueno, R., Fujita, I., et al. *Proc. Natl. Acad. Sci. USA* **85**(11), 4082-4086 (1988).
4. Giles, H. and Leff, P. *Prostaglandins* **35**(2), 277-300 (1988).
5. Song, W.-L., Wang, M., Ricciotti, E., et al. *J. Biol. Chem.* **283**(2), 1179-1188 (2008).

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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