

# Produktinformation



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# PRODUCT INFORMATION



## tetranor-PGDM

Item No. 12850

CAS Registry No.: 70803-91-7

Formal Name: 9α-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:  $C_{16}H_{24}O_{7}$ FW: 328.4 **Purity:** ≥90%

Stability: ≥1 year at -80°C Supplied as: A solution in methanol

## **Laboratory Procedures**

For long term storage, we suggest that tetranor-PGDM be stored as supplied at -80°C. It should be stable for at least one year. NOTE: 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.

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.

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 tetranor-PGDM is needed, it can be prepared by evaporating the methanol and directly dissolving the neat oil in aqueous buffers. 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 D<sub>2</sub> (PGD<sub>2</sub>; 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. PGD<sub>2</sub> is also produced in the brain by lipocalin-PGDS also known as b-trace.  $^{2,3}$  In the brain, PGD<sub>2</sub> 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.<sup>4</sup> tetranor-PGDM is a major metabolite of PGD<sub>2</sub> that is detectable in human and mouse urine.<sup>5</sup> The levels of tetranor-PGDM and 2,3-dinor-11β-PG $\tilde{F}_{2g}$  (Item No. 16530), a related PGD<sub>2</sub> metabolite, in human urine were found to be 1.5 ± 0.3 and 0.6 ± ng/mg creatinine, respectively. tetranor-PGDM was detected in murine urine at a level of 8.1 ± 1.3 ng/mg creatinine.5

#### References

- 1. Roberts, L.J., II and Sweetman, B.J. Prostaglandins 30, 383-400 (1985).
- 2. Hayaishi, O. J. Biol. Chem. 263, 14593-14596 (1988).
- 3. Onoe, H., Ueno, R., Fujita, I., et al. Proc. Natl. Acad. Sci. USA 85, 4082-4086 (1988).
- Giles, H. and Leff, P. Prostaglandins 35, 277-300 (1988).
- 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.

al 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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