

PRODUCT INFORMATION



Thromboxane B₂-d₄

Item No. 319030

CAS Registry No.: 1346112-79-5
Formal Name: (5Z)-7-[(2R,3S,4S,6R)-tetrahydro-4,6-dihydroxy-2-[(1E,3S)-3-hydroxy-1-octen-1-yl]-2H-pyran-3-yl]-5-heptenoic-3,3,4,4-d₄ acid

Synonym: TXB₂-d₄
MF: C₂₀H₃₀D₄O₆
FW: 374.5

Chemical Purity: ≥98% (Thromboxane B₂)

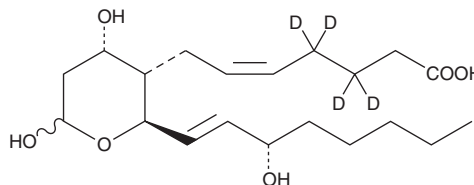
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀

Supplied as: A 100 µg/ml solution in methyl acetate

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

Thromboxane B₂-d₄ (TXB₂-d₄) is intended for use as an internal standard for the quantification of TXB₂ (Item No. 19030) by GC- or LC-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).

TXB₂-d₄ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate 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 TXB₂-d₄ in these solvents is approximately 100, 25, and 50 mg/ml, respectively.

Description

TXB₂ is a non-enzymatically derived, stable, inactive metabolite of TXA₂, which is highly unstable.¹⁻³ Serum levels of TXB₂ positively correlate with platelet COX-1 activation.^{4,5} Urinary levels of TXB₂ reflect intrarenal TXA₂ synthesis, while its metabolites, 11-dehydro TXB₂ (Item No. 19500) and 2,3-dinor TXB₂ (Item No. 19510), reflect systemic TXA₂ secretion.^{2,6,7}

References

1. Needleman, P., Moncada, S., Bunting, S., et al. *Nature* **261(5561)**, 558-560 (1976).
2. Patrono, C., Ciabattoni, G., Pugliese, F., et al. *J. Clin. Invest.* **77(2)**, 590-594 (1986).
3. Uyama, O., Matsumoto, M., Fujisawa, A., et al. *Prostaglandins Med.* **7(3)**, 199-207 (1981).
4. Arantes, F.B.B., Menezes, F.R., Franci, A., et al. *Adv. Ther.* **37(1)**, 420-430 (2020).
5. Ferroni, P., Riondino, S., Vazzana, N., et al. *Thromb. Haemost.* **108(6)**, 1109-1123 (2012).
6. Patrono, C., Ciabattoni, G., Patrignani, P., et al. *Adv. Prostaglandin Thromboxane Leukot. Res.* **11**, 493-498 (1983).
7. Lawson, J.A., Patrono, C., Ciabattoni, G., et al. *Anal. Biochem.* **155(1)**, 198-205 (1986).

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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