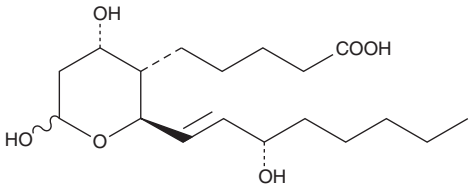
PRODUCT INFORMATION

2,3-dinor Thromboxane B_1

Item No. 10006330

CAS Registry No.: 196493-76-2
Formal Name: 9α,11,15S-trihydroxy-2,3-dinor-thromba-13E-en-1-oic acid
Synonym: 2,3-dinor TXB_1
MF: $C_{18}H_{32}O_6$
FW: 344.4
Purity: ≥98%
Supplied as: A 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

2,3-dinor TXB_1 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 (DMF) purged with an inert gas can be used. The solubility of 2,3-dinor TXB_1 in these solvents is approximately 50 mg/ml in ethanol and DMF and approximately 20 mg/ml DMSO.

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 2,3-dinor TXB_1 is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 2,3-dinor TXB_1 in PBS (pH 7.2) is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

TXB_2 is released in substantial quantities from aggregating platelets and metabolized during circulation to 11-dehydro TXB_2 and 2,3-dinor TXB_2.[1] In rats and rabbits, 2,3-dinor TXB_1 has been identified as another urinary metabolite of TXB_2.[2,3] However in human urine, only trace amounts of 2,3-dinor TXB_1 have been identified.[2] In rats, 2,3-dinor TXB_1 is excreted at a much higher rate than 2,3-dinor TXB_2 (19.2 ± 4.9 ng/24 hr and 1.6 ± 0.3 ng/24 hr, respectively).[2] Therefore, urinary 2,3-dinor TXB_1 is a suitable marker of thromboxane biosynthesis in rats.

References

1. Ciabattoni, G., Pugliese, F., Davi, G., *et al*. Fractional conversion of thromboxane B_2 to urinary 11-dehydrothromboxane B_2 in man. *Biochim. Biophys. Acta* **992**, 66-70 (1989).
2. Chiabrando, C., Corada, M., Bachi, A., *et al*. Urinary excretion of 2,3-dinor-thromboxane B_1, a major metabolite of thromboxane B_2 in the rat. *Prostaglandins* **47**, 409-422 (1994).
3. Westlund, P., Kumlin, M., Nordenström, A., *et al*. Circulating and urinary thromboxane B_2 metabolites in the rabbit: 11-dehydro-thromboxane B_2 as parameter of thromboxane production. *Prostaglandins* **31(3)**, 413-443 (1986).

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