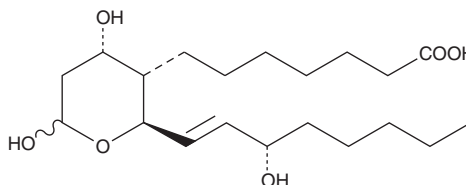


# Product Information



## Thromboxane B<sub>1</sub> Catalog No. 10006610

**CAS No.:** 64626-32-0  
**Formal Name:** 9,11,15-trihydroxy-thrombox-13-en-1-oic acid  
**MF:** C<sub>20</sub>H<sub>36</sub>O<sub>6</sub>  
**FW:** 372.5  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that thromboxane B<sub>1</sub> (TXB<sub>1</sub>) be stored as supplied at -20°C. It will be stable for at least two years.

TXB<sub>1</sub> 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 TXB<sub>1</sub> in DMSO is 25 mg/ml and 50 mg/ml in ethanol and DMF.

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 TXB<sub>1</sub> is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of TXB<sub>1</sub> in PBS (pH 7.2) is at least 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Dihomo-γ-linolenic acid (DGLA) is one of the 20-carbon fatty acids that can be metabolized to prostaglandins and TXs by cyclooxygenases 1 and 2 (COX-1/COX-2).<sup>1</sup> The result of this metabolism in the human platelet yields TXB<sub>1</sub>. TXB<sub>1</sub> is produced in small amounts when DGLA is added to washed suspensions of human platelets, while the major metabolism of this 1-series fatty acid is *via* 12-lipoxygenase.<sup>2</sup> However, when co-incubated with amounts of ethanol often found in intoxicated humans, the metabolism of DGLA shifts to an enhanced production of TXB<sub>1</sub>.<sup>2</sup> Urinary TXB<sub>1</sub> or its metabolites may thus be a specific biomarker of prior ethanol abuse.

### References

1. Levin, G., Duffin, K.L., Obukowicz, M.G., *et al.* Differential metabolism of dihomο-γ-linolenic acid and arachidonic acid by cyclooxygenase-1 and cyclooxygenase-2: Implications for cellular synthesis of prostaglandin E<sub>1</sub> and prostaglandin E<sub>2</sub>. *Biochem. J.* **365**, 489-496 (2002).
2. Manku, M.S., Oka, M., and Horrobin, D.F. Differential regulation of the formation of prostaglandins and related substances from arachidonic acid and from dihomοgammalinolenic acid. I. Effects of ethanol. *Prostaglandins Med.* **3(2)**, 119-128 (1979).

### Related Products

Thromboxane B<sub>2</sub> - Cat. No. 19030 • 2,3-dinor Thromboxane B<sub>2</sub> - Cat. No. 19050 • 11-dehydro Thromboxane B<sub>2</sub> - Cat. No. 19500 • 2,3-dinor Thromboxane B<sub>1</sub> - Cat. No. 10006330

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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