

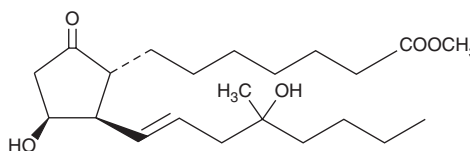
# Product Information



## 11 $\beta$ -Misoprostol

Catalog No. 13825

**CAS Registry No.:** 58717-36-5  
**Formal Name:** 9-oxo-11 $\beta$ ,16-dihydroxy-16-methyl-prost-13E-en-1-oic acid, methyl ester  
**MF:** C<sub>22</sub>H<sub>38</sub>O<sub>5</sub>  
**FW:** 382.5  
**Purity:**  $\geq$ 98%  
**Stability:**  $\geq$ 1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that 11 $\beta$ -misoprostol be stored as supplied at -20°C. It will be stable for at least one year.

11 $\beta$ -Misoprostol 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 11 $\beta$ -misoprostol in these solvents is approximately 50 mg/ml in ethanol and DMSO and 100 mg/ml in 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 11 $\beta$ -misoprostol is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 11 $\beta$ -misoprostol in PBS (pH 7.2) is approximately 1.6 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Misoprostol is a widely sold analog of PGE<sub>1</sub> which has potent but relatively non-selective agonist activity with respect to the prostanoid EP receptor subgroup.<sup>1</sup> Misoprostol has been used therapeutically for many years in humans for the treatment of gastric ulcer disease under the Searle tradename Cytotec.<sup>2</sup>

11 $\beta$ -Misoprostol is one of several impurities which are possible in the production of bulk commercial preparations of misoprostol, and is somewhat difficult to distinguish from other impurities such as 8-*iso* misoprostol.<sup>3</sup>

The pharmacology and EP receptor binding affinity for 11 $\beta$ -misoprostol have not been published.

### References

1. Abramovitz, M., Adam, M., Boie, Y., *et al.* The utilization of recombinant prostanoid receptors to determine the affinities and selectivities of prostaglandins and related analogs. *Biochim. Biophys. Acta* **1483**, 285-293 (2000).
2. Collins, P.W. Misoprostol: Discovery, development, and clinical applications. *Medicinal Research Reviews* **10**, 149-172 (1990).
3. Iyer, R.R. Personal communication (2003).

### Related Products

Misoprostol - Cat. No. 13820 • Misoprostol (free acid) - Cat. No. 13821 • 11 $\beta$ -Prostaglandin E<sub>2</sub> - Cat. No. 14510

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**WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.**

#### 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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