

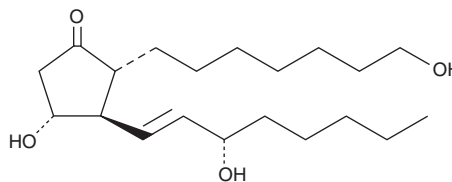
# PRODUCT INFORMATION



## Prostaglandin E<sub>1</sub> Alcohol

Item No. 13020

**CAS Registry No.:** 21562-57-2  
**Formal Name:** 1,11 $\alpha$ ,15S-trihydroxy-prost-13E-en-9-one  
**Synonyms:** 1-hydroxy Prostaglandin E<sub>1</sub>, PGE<sub>1</sub> Alcohol  
**MF:** C<sub>20</sub>H<sub>36</sub>O<sub>4</sub>  
**FW:** 340.5  
**Purity:**  $\geq$ 99%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

Prostaglandin E<sub>1</sub> (PGE<sub>1</sub>) alcohol is supplied as a crystalline solid. A stock solution may be made by dissolving the PGE<sub>1</sub> alcohol in the solvent of choice, which should be purged with an inert gas. PGE<sub>1</sub> alcohol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PGE<sub>1</sub> alcohol in ethanol and DMF is approximately 25 mg/ml and approximately 20 mg/ml in DMSO.

PGE<sub>1</sub> alcohol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PGE<sub>1</sub> alcohol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. PGE<sub>1</sub> alcohol has a solubility of approximately 1 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Prostaglandin E<sub>1</sub> (PGE<sub>1</sub>) alcohol is a non-irritant bronchodilator, with relaxant activity on the human bronchial muscle *in vitro*, comparable to PGE<sub>1</sub> at concentrations of 0.01 to 10.0  $\mu$ g/ml.<sup>1,2</sup> Asthmatics receiving single dose inhalation treatments reported significant but short-acting bronchodilation at doses of 10 and 30  $\mu$ g.<sup>1</sup> PGE<sub>1</sub> alcohol binds to the mouse recombinant EP<sub>3</sub> and EP<sub>4</sub> receptors with K<sub>i</sub> values of 330 and 190 nM, respectively.<sup>3</sup>

### References

1. Nizankowska, E., Sheridan, A.Q., Maile, M.H., *et al.* Bronchodilatory properties of 2-decarboxy-2-hydroxymethyl prostaglandin E<sub>1</sub>. *Prostaglandins* **29(3)**, 349-362 (1985).
2. Gardiner, P.J., Copas, J.L., Schneider, C., *et al.* 2-Decarboxy-2-hydroxymethyl prostaglandin E<sub>1</sub> (TR4161), a prostaglandin bronchodilator of low tracheobronchial irritancy. *Prostaglandins* **19(3)**, 349-370 (1980).
3. Kiriya, M., Ushikubi, F., Kobayashi, T., *et al.* Ligand binding specificities of the eight types and subtypes of the mouse prostanoid receptors expressed in Chinese hamster ovary cells. *Br. J. Pharmacol.* **122(2)**, 217-224 (1997).

#### 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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