

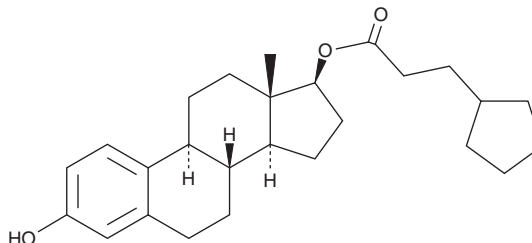
# PRODUCT INFORMATION



## Estradiol Cypionate

Item No. 31105

**CAS Registry No.:** 313-06-4  
**Formal Name:** estra-1,3,5(10)-triene-3,17 $\beta$ -diol  
17-cyclopentanepropanoate  
**Synonyms:** Estradiol 17 $\beta$ -Cyclopentanepropanoate,  
Estradiol 17-Cypionate, NSC 3354  
**MF:** C<sub>26</sub>H<sub>36</sub>O<sub>3</sub>  
**FW:** 396.6  
**Purity:**  $\geq$ 98%  
**Supplied as:** A 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

Estradiol cypionate is supplied as a solid. A stock solution may be made by dissolving the estradiol cypionate in the solvent of choice, which should be purged with an inert gas. Estradiol cypionate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of estradiol cypionate in ethanol is approximately 20 mg/ml and approximately 15 mg/ml in DMSO and DMF.

Estradiol cypionate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, estradiol cypionate should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Estradiol cypionate has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Estradiol cypionate is a synthetic estrogen and an ester derivative of 17 $\beta$ -estradiol (Item No. 10006315).<sup>1-3</sup> *In vivo*, estradiol cypionate (0.1 mg/kg per day) reduces estrogen depletion-induced spikes in basal tail temperature in ovariectomized wild-type, estrogen receptor  $\alpha$  knockout (*ER $\alpha$* <sup>-/-</sup>), and *ER $\beta$* <sup>-/-</sup> mice.<sup>1</sup> It increases the rate of pregnancy in cows induced to ovulate small dominant follicles with gonadotropin-releasing hormone (GnRH).<sup>2</sup> Estradiol cypionate also reduces edema and articular joint neutrophil infiltration in an ovariectomized mouse model of zymosan-induced arthritis.<sup>3</sup> Formulations containing estradiol cypionate have been used in the treatment of menopausal symptoms and low estrogen levels.

### References

1. Opas, E.E., Gentile, M.A., Kimmel, D.B., *et al.* Estrogenic control of thermoregulation in ER $\alpha$ KO and ER $\beta$ KO mice. *Maturitas* **53**(2), 210-216 (2006).
2. Jinks, E.M., Smith, M.F., Atkins, J.A., *et al.* Preovulatory estradiol and the establishment and maintenance of pregnancy in suckled beef cows. *J. Anim. Sci.* **91**(3), 1176-1185 (2013).
3. Schneider, A.H., Kanashiro, A., Dutra, S.G.V., *et al.* Estradiol replacement therapy regulates innate immune response in ovariectomized arthritic mice. *Int. Immunopharmacol.* **72**, 504-510 (2019).

#### 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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