
Product Data Sheet

Product Name: Alpha-Estradiol-d2

Cat. No.: GC68643

Chemical Properties

Cas. No. 81586-94-9

Formula $C_{18}H_{22}D_2O_2$ M.Wt 274.39

Solubility DMSO : 62.5 mg/mL (227.78 mM; ultrasonic and warming Store
and heat to 60°C); Ethanol : 11.11 mg/mL (40.49 mM; Need Storage at -
ultrasonic) 20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it
in the ultrasonic bath for a while. Stock solution can be stored below -20°C for
several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship
with RT , or blue ice upon request.

Structure

Background

Alpha-Estradiol-d₂ is the deuterium labeled Alpha-Estradiol. Alpha-Estradiol is a weak estrogen and a 5 α -reductase inhibitor which is used as a topical medication in the treatment of androgenic alopecia[1].

Stable heavy isotopes of drogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Schriefers H, et al. Inhibition of testosterone metabolism by 17-alpha-estradiol in rat liver slices. Arzneimittelforschung. 1991 Nov;41(11):1186-9.

[3]. Santos RS, et al. The effects of 17 alpha-estradiol to inhibit inflammation in vitro. Biol Sex Differ. 2017 Sep 6;8:30.

[4]. Zhang HB, et al. 17-Alpha-estradiol ameliorating oxygen-induced retinopat in a

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

murine model. Jpn J Ophthalmol. 2012 Jul;56(4):407-15.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA