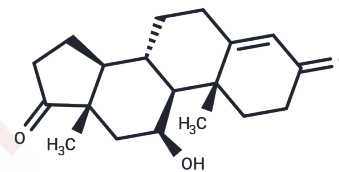


11-Beta-hydroxyandrostenedione

Chemical Properties

CAS No. : 382-44-5
 Formula: C₁₉H₂₆O₃
 Molecular Weight: 302.41
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	11-Beta-hydroxyandrostenedione (NSC-17102) is a steroid mainly found in the adrenal origin (11 β -hydroxylase is present in adrenal tissue, but absent in ovarian tissue), which is a 11 β -hydroxysteroid dehydrogenase isozymes inhibitor. Measuring plasma 11-Beta-hydroxyandrostenedione can distinguish the adrenal or ovarian origin of hyperandrogenism with 4-androstenedione increases.
Targets(IC50)	Endogenous Metabolite,Dehydrogenase
In vitro	21-deoxycortisol (21dF) and 21-deoxycortisone (21dE) are assayed within the LNCaP cell line to establish that this conversion is catalyzed by the lyase activity of CYP17A1. After the transfection of CYP17A1, 11-Beta-hydroxyandrostenedione (11OHA4)-pathway metabolites increase, 21dF, and 21dE are in fact metabolized to 11-Beta-hydroxyandrostenedione and 11-ketoprogesterone (11KP4) by CYP17A1, respectively [2].
In vivo	In 21-hydroxylase deficiency, Cushing's syndrome, and hyperandrogenism of adrenal origin, the plasma concentration of 11-Beta-hydroxyandrostenedione (11beta-hydroxy-4-androstene-3,17-dione) is very high. In congenital 11-hydroxylase deficiency and adrenal insufficiency, the plasma concentration of 11-Beta-hydroxyandrostenedione (11beta-hydroxy-4-androstene-3,17-dione) is very low. Thus, when plasma 4-androstenedione is elevated, it is useful to measure the plasma 11-Beta-hydroxyandrostenedione level in order to determine the adrenal or ovarian origin of the hyperandrogenism [1].

Solubility Information

Solubility	DMSO: 260 mg/mL (859.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3068 mL	16.5338 mL	33.0677 mL
5 mM	0.6614 mL	3.3068 mL	6.6135 mL
10 mM	0.3307 mL	1.6534 mL	3.3068 mL
50 mM	0.0661 mL	0.3307 mL	0.6614 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ibrahim F, et al. Plasma 11beta-hydroxy-4-androstene-3,17-dione: comparison of a time-resolved fluoroimmunoassay using a biotinylated tracer with a radioimmunoassay using a tritiated tracer. *J Steroid Biochem Mol Biol.* 2003 Apr;84(5):563-8.

Rachelle Gent, et al. 11 α -Hydroxyprogesterone, a potent 11 β -hydroxysteroid dehydrogenase inhibitor, is metabolised by steroid-5 α -reductase and cytochrome P450 17 α hydroxylase/17,20-lyase to produce C11 α -derivatives of 21-deoxycortisol

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