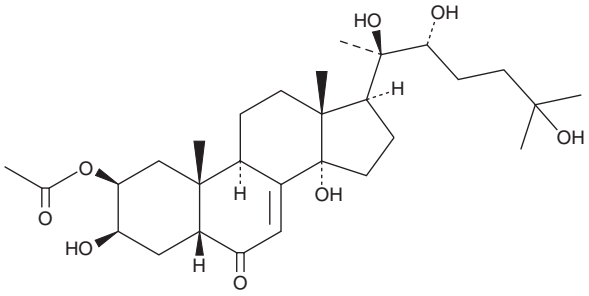
PRODUCT INFORMATION

2-O-Acetyl-20-hydroxyecdysone

Item No. 28063

CAS Registry No.:	19536-25-5
Formal Name:	(2β,3β,5β,22R)-2-(acetyloxy)-3,14,20,22,25-pentahydroxy-cholest-7-en-6-one
Synonym:	β-Ecdysone 2-acetate
MF:	$C_{29}H_{46}O_8$
FW:	522.7
Purity:	≥95%
UV/Vis.:	λ_{max}: 244 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Cyanotis arachnoides*



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

Laboratory Procedures

2-O-Acetyl-20-hydroxyecdysone is supplied as a solid. A stock solution may be made by dissolving the 2-O-acetyl-20-hydroxyecdysone in the solvent of choice, which should be purged with an inert gas. 2-O-Acetyl-20-hydroxyecdysone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 2-O-acetyl-20-hydroxyecdysone in DMSO and DMF is approximately 30 mg/ml and approximately 20 mg/ml in ethanol.

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. Organic solvent-free aqueous solutions of 2-O-acetyl-20-hydroxyecdysone can be prepared by directly dissolving the solid in aqueous buffers. The solubility of 2-O-acetyl-20-hydroxyecdysone in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2-O-Acetyl-20-hydroxyecdysone is an ecdysone steroid hormone that has been found in plants and animals.[1] It completely inhibits the growth of the bacteria *S. aureus*, *E. coli*, and *P. vulgaris*, as well as the fungi *C. albicans*, *A. alternata*, and *F. solani* when used at a concentration of 10 µg/ml. 2-O-Acetyl-20-hydroxyecdysone (50 µM) increases aggregation of amyloid-β (1-42) (Aβ42), increases fibril formation by 60%, and decreases oligomer levels in cell-free assays.[2] It reduces Aβ42-induced cytotoxicity of SH-SY5Y cells when used at concentrations of 5 and 10 µM.

References

1. Shirshova, T.I., Politova, N.K., Burtseva, S.A., *et al.* Antimicrobial activity of natural ecdysteroids from *Serratula coronata* L. and their acyl derivatives. *Pharm. Chem. J.* **40(5)**, 268–271 (2006).
2. Yang, S.-G., Zhang, X., Sun, X.-S., *et al.* Diverse ecdysterones show different effects on amyloid-β42 aggregation but all uniformly inhibit amyloid-β42-induced cytotoxicity. *J. Alzheimers. Dis.* **22(1)**, 107-117 (2010).

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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/22/2022

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM