

Product Data Sheet

Product Name: Veratridine

Cat. No.: GC14730

Chemical Properties

Cas. No. 71-62-5

Chemical Name (3S,4S,4aS,6aS,6bS,8R,8aS,9S,9aS,12S,15aS,15bR,16aR,16bR)-4,6b,8,8a,9,15b-hexahydroxy-9,12,16b-trimethyldocosahydro-1H-4,16a-epoxybenzo[4,5]indeno[1,2-h]pyrido[1,2-b]isoquinolin-3-yl 3,4-dimethoxybenzoate

SMILES O[C@@]1([C@@]2([C@H]3CN2[C@H]3CC[C@H](C)C2)[C@]4([C@@]3(C)O)O)O)(C[C@H]4O)[C@H]5[C@@]1([C@@]2(CC[C@H]6OC(C(C=C7OC)=CC=C7OC)=O)(C)[C@H]8CC5)(C1)O[C@@]86O

Formula C₃₆H₅₁NO₁₁

M.Wt 673.79

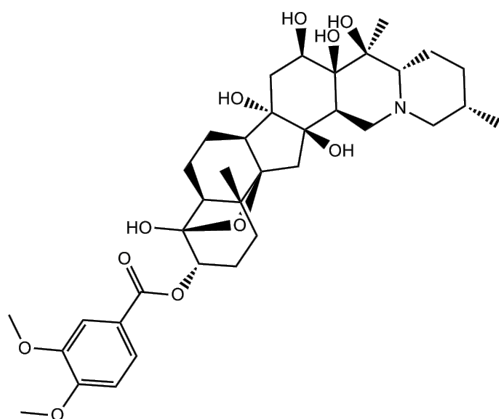
Solubility <33.69mg/ml in DMSO

Storage Store at -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



Protocol

Cell experiment [1]:

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

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Cell lines HCT-116 colon cancer cells (expressing GFP-UBXN2A)

Preparation method The solubility of this compound in DMSO is >10mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting condition 20 and 40 µM, 24 hours

Applications Veratridine is the main UBXN2A enhancer, increased UBXN2A protein levels in a dose-dependent manner.

Animal experiment [2]:

Animal models C57Bl/6N mice(HCT-116 cells expressing GFP-UBXN2A were injected into 6 to 8 week old nude female mice)

Dosage form Intraperitoneal injection (IP), 0.125 mg/kg for 28 days

Application Veratridine (VTD) was sufficient to induce UBXN2A protein levels, resulting in colon cancer cell death in UBXN2A- and mot-2-dependent manners.

Other notes Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

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References:

[1]. Abdullah A, Sane S, Branick KA, et al. A plant alkaloid, veratridine, potentiates cancer chemosensitivity by UBXN2A-dependent inhibition of an oncoprotein, mortalin-2. *Oncotarget*. 2015 Sep 15;6(27):23561-81.

Background

Voltage-gated Na⁺ channel opener; increases intracellular Ca²⁺ with no effect on the Na⁺/Ca²⁺ exchanger. Steroid-derived alkaloid neurotoxin. Increases membrane Na⁺ permeability and depolarizes excitable tissues.

Reference:

[1]. Purification, solubility and pKa of veratridine.

McKinney et al.

Anal.Biochem., 1986;153:33

[2]. Effects of Ca²⁺ channel antagonists on chromaffin cell death and cytosolic Ca²⁺ oscillations induced by veratridine.

Maroto et al.

Eur.J.Pharmacol., 1994;270:331

[3]. Mechanism of the persistent sodium current activator veratridine-evoked Ca²⁺ elevation: implication for epilepsy.

Fekete et al.

J.Neurochem., 2009;111:745

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