

Catharanthine

Catalog No: tcsc2757



Available Sizes

Size: 50mg

Size: 100mg



Specifications

CAS No:

2468-21-5

Formula:

$C_{21}H_{24}N_2O_2$

Pathway:

Neuronal Signaling;Membrane Transporter/Ion Channel

Target:

nAChR;nAChR

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Alternative Names:

(+)-3,4-Didehydrocoronaridine

Observed Molecular Weight:

336.43

Product Description

Catharanthine inhibits nicotinic receptor mediated diaphragm contractions with IC50 of 59.6 μ M.

Target: nAChR

Catharanthine evokes a concentration-dependent attenuation of carbachol responses in the rat ileum preparation, producing rightward curve displacements and decreases in maximal agonist responses. The mixture of serpentine, plus ajmalicine and catharanthine reveals a concentration-dependent inhibitory effect of acetylcholinesterase (AChE), with an IC₅₀ at ca. 2.25 µg/ml [1]. Catharanthine can induce the self-association of tubulin into linear indefinite polymers with an efficacy that is 75% that of vinblastine or vincristine. Catharanthine binds to tubulin alpha-beta dimer with binding constant of 2.8 mM [2]. Catharanthine stimulates release of amylase from pancreatic fragments and to cause extensive degranulation of pancreatic acinar cells with accumulation of membrane material in the Golgi region. Catharanthine induces a delayed release of Ca²⁺ from prelabeled pancreatic fragments as compared to bethanechol [3]. Catharanthine inhibits epibatidine-induced Ca(2+) influx in TE671-α, -β, -γ, -δ cells in a noncompetitive manner with similar potencies IC₅₀ of 17 mM-25 mM. Catharanthine inhibits [3H]TCP binding to the desensitized Torpedo AChR with higher affinity compared to the resting AChR. Catharanthine enhances [3H]cytisine binding to resting but activatable Torpedo AChRs, suggesting desensitizing properties [4].

