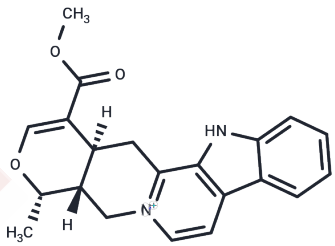
Data Sheet (Cat.No.TN4997)

TargetMol

Serpentine

Chemical Properties



CAS No. : 18786-24-8

Formula: C21H21N2O3

Molecular Weight: 349.4

Storage: Store at low temperature
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	Serpentine is an alkaloid found in the roots of Rosa Centifolia that acts as an insulin sensitizer to assist insulin in lowering blood glucose.Serpentine activates the phosphorylation of AMPK, which stimulates glucose uptake by C2C12 cells.Serpentine increases the expression of GSK-3β mRNA in muscle tissues, which enhances glucose uptake.Serpentine also increases glucose production and hepatic gluconeogenesis. Serpentine has a significant effect on glucagon secretion and hepatic gluconeogenesis. Serpentine significantly increased glucagon secretion and hepatic gluconeogenesis. In high-fat diet/streptozotocin (HFD/STZ)-induced diabetic mice, Serpentine significantly prolonged insulin hypoglycemia, significantly decreased exogenous insulin use, and inhibited endogenous insulin secretion.
Targets(IC50)	IGF-1R
In vitro	This work investigates potential analytical variability in environmental investigations of natural occurrences of asbestos (NOA) due to intergrown Serpentine minerals. METHODS AND RESULTS: Franciscan complex and serpentinite rock samples were obtained from likely NOA sites in coastal Northern California with geographic information system (GIS) maps, then analyzed using polarized light microscopy (PLM), transmission electron microscopy with energy-dispersive X-ray analysis and selected area electron diffraction (TEM/SAED/EDS), and environmental scanning electron microscopy with EDS (ESEM/EDS). Non-asbestos Serpentine fibers were superficially similar to chrysotile but were differentiated quickly using TEM morphology criteria and reference SAED overlays. 94 NOA fibers were classified as asbestiform chrysotile (62%), polygonal Serpentine (34%), lizardite scrolls (2%), and lizardite laths (2%). Chrysotile fibril widths (mean = 42 nm) were significantly different from those of polygonal Serpentine and lizardite laths (167 and 505 nm, respectively), but not lizardite scrolls (37 nm).[1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.862 mL	14.3102 mL	28.6205 mL
5 mM	0.5724 mL	2.862 mL	5.7241 mL
10 mM	0.2862 mL	1.431 mL	2.862 mL
50 mM	0.0572 mL	0.2862 mL	0.5724 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

Sander H, et al. Site of synthesis, metabolism and translocation of senecionine N-oxide in cultured roots of Senecio erucifolius. Plant cell, tissue and organ culture. 1989;18: 19-31.
Bai P, et al. A facile route to preparation of high purity nanoporous silica from acid-leached residue of serpentine. J Nanosci Nanotechnol. 2014 Sep;14(9):6915-22.
Wylie AG, et al. Methodologies for determining the sources, characteristics, distribution, and abundance of asbestiform and nonasbestiform amphibole and serpentine in ambient air and water. J Toxicol Environ Health B Crit Rev. 2015;18(1):1-42.