S-Trityl-L-cysteine

Cat. No.: HY-W011102

CAS No.: 2799-07-7

Molecular Formula: $C_{22}H_{21}NO_2S$

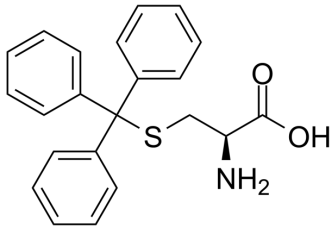
Molecular Weight: 363.47

Target: Kinesin; Apoptosis

Pathway: Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (68.78 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.7513 mL	13.7563 mL	27.5126 mL
5 mM	0.5503 mL	2.7513 mL	5.5025 mL
10 mM	0.2751 mL	1.3756 mL	2.7513 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1 mg/mL (2.75 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1 mg/mL (2.75 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1 mg/mL (2.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

S-Trityl-L-cysteine (NSC 83265) is a selective and allosteric kinesin Eg5 inhibitor with an IC_{50} of 1 μM for the inhibition of basal ATPase activity and 140 nM for the microtubule-activated ATPase activity. S-Trityl-L-cysteine has antitumor activities [1][2].

IC_{50} & Target

Eg5

In Vitro

S-Trityl-L-cysteine binds to a unique pocket in the Eg5 motor domain formed by secondary structural elements (helix

a2/loop L5/helix a3)[1].
S-Trityl-L-cysteine (1-20 μM; for 72 h) could mediate cell apoptosis, as well as cell cycle arrest, in a dose-dependent manner.
S-Trityl-L-cysteine-mediated apoptosis and cell cycle arrest were triggered by activation of the mitogen-activated protein kinase and nuclear factor kB signaling pathways[1].
S-Trityl-L-cysteine induces mitotic arrest in HeLa cells (IC50 of 700 nM) with characteristic monoastral spindles[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Wei Wu, et al. S-trityl-L-cysteine, a novel Eg5 inhibitor, is a potent chemotherapeutic strategy in neuroblastoma. Oncol Lett. 2018 Jul;16(1):1023-1030.

[2]. Salvatore DeBonis, et al. In vitro screening for inhibitors of the human mitotic kinesin Eg5 with antimitotic and antitumor activities. Mol Cancer Ther. 2004 Sep;3(9):1079-90.

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