Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Vinblastine (sulfate)

Catalog No: tcsc1365

Available Sizes

Size: 50mg

Size: 100mg

Size: 200mg

Size: 500mg

Size: 1g

Size: 2g

Size: 5g

Specifications

CAS No:
143-67-9

Formula:
$C_{46}H_{60}N_4O_{13}S$

Pathway:
Cell Cycle/DNA Damage;Cytoskeleton;Autophagy

Target:
Microtubule/Tubulin;Microtubule/Tubulin;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 44 mg/mL (48.40 mM)

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Alternative Names:
Vincaleukoblastine sulfate salt

Observed Molecular Weight:
909.05

Product Description

Vinblastine sulfate is a cytotoxic alkaloid used against various cancer types. Vinblastine sulfate inhibits the formation of microtubule and suppresses nAChR with an **IC_{50}** of 8.9 μM.

IC50 & Target: IC50: 8.9 μM(nAChR)[1]

In Vitro: Vinblastine does not depolymerize spindle microtubules, yet it powerfully blocks mitosis (for example, IC_{50} 0.8 nM in HeLa cells) and cells die by apoptosis[2]. In NB4 cells, vinblastine produces alteration of p53 and DNA fragmentation. Vinblastine treatment has an antiproliferative effect via the induction of apoptosis producing Bax/Bcl-2 imbalance. Vinblastine treatment suppresses NFκB expression and depresses NFκB-DNA binding activity while maintaining JNK activation that subsequently results in apoptotic response through caspase-dependent pathway[3]. Vinblastine is found to trigger apoptosis as evidenced by the loss of mitochondrial membrane potential, the release of both cytochrome c and apoptosis inducing factor, activation of caspase-9 and 3, and cleavage of Poly (ADP-ribose)-Polymerase[4].

In Vivo: Vinblastine is a widely used anticancer drug with undesired side effects. Its conjugation with carrier molecules could be an efficient strategy to reduce these side effects[5].