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

Vincristine (sulfate)

Catalog No: tcsc1778

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Specifications

CAS No:
2068-78-2

Formula:
$C_{46}H_{58}N_4O_{14}S$

Pathway:
Cell Cycle/DNA Damage;Cytoskeleton

Target:
Microtubule/Tubulin;Microtubule/Tubulin

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 100 mg/mL (108.34 mM)

Alternative Names:
Leurocristine sulfate;22-Oxovincaleukoblastine sulfate

Observed Molecular Weight:
923.04

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Product Description

Vincristine (sulfate) is an inhibitor of polymerization of microtubules by binding to tubulin with IC_{50} of 32 μM in a cell-free assay.

In Vitro: Vincristine inhibits net addition of tubulin dimers at assembly ends of steady-state microtubules with K_i of 85 nM[1]. Vincristine stabilizes the spindle apparatus resulting in failure of the chromosomes to segregate leading to metaphase arrest and inhibition of mitosis at low concentrations. At higher concentrations, Vincristine may disrupt and induce total depolymerization of microtubules[2]. Vincristine induces apoptosis in tumor cells and inhibits SH-SY5Y cell proliferation with IC_{50} of 0.1 μM. Vincristine induces mitotic arrest and promots the expression of caspase-3 and -9 and cyclin B, while decreasing the expression of cyclin D[3]. Vincristine induced neurotoxicity is caused by interference with microtubule function, which results in blockage of axonal transport and thus in axonal degeneration[4].

In Vivo: Vincristine (3 mg/kg, i.p.) induces mean growth delay of > 120 and > 52 day, and repopulates fractions of 0.06% and 5%, administrated in mice bearing bilateral subcutaneous xenografts Rh12 or Rh18, respectively[5].