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

Raltitrexed

Catalog No: tcsc2894

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
112887-68-0

Formula:
$C_{21}H_{22}N_4O_6S$

Pathway:
Apoptosis;Cell Cycle/DNA Damage

Target:
Thymidylate Synthase;Nucleoside Antimetabolite/Analog

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 29 mg/mL (63.25 mM)

Alternative Names:
ZD1694;D1694;ICI-D1694

Observed Molecular Weight:
458.49

Product Description

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Raltitrexed is an inhibitor of **thymidylate synthase** and an **antimetabolite** drug used for cancer treatment.

In Vitro: Raltitrexed inhibits HepG2 proliferation by arresting the cell cycle at G0/G1, and the cell cycle is mediated via downregulation of cyclin A and CDK2[1]. Raltitrexed (0.1, 0.5, 2.5 μg/mL) decreases the viability of SGC7901 cells in a dose- and time-dependent manner. Raltitrexed (0.5 μg/mL) shows typical apoptotic morphology, including nuclear shrinkage, fragmentation, chromatin condensation and apoptotic bodies in SGC7901 cells. Raltitrexed blocks the cell cycle at the G0/G1 phase, decreases in the mitochondrial membrane potential. Raltitrexed also increases the level of ROS, induces caspase-3-dependent apoptosis via activation of the mitochondria, and increases TS protein and mRNA expression levels[3]. Raltitrexed (1.5 nM) reduces the number of GM00637 cells, selectively induces gene conversions, but does not affect DSB-induced HR or NHEJ[4].

In Vivo: Raltitrexed (0, 5, 10, 11.5, 13.5, 15 mg/kg b/w, i.p.) increases the rates of resorbed embryos and growth retardation of murine model of NTDs in a dose dependent manner. Raltitrexed (11.5 mg/kg b/w) maximally inhibits the thymidylate synthase (TS) activity in embryonic tissue, decreases dTMP levels and while increases dUMP levels[2].