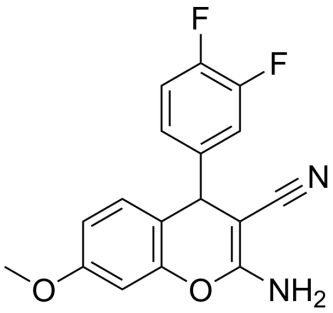
Tubulin polymerization-IN-2

Cat. No.:	HY-143247
CAS No.:	2873399-22-3
Molecular Formula:	$C_{17}H_{12}F_2N_2O_2$
Molecular Weight:	314.29
Target:	Microtubule/Tubulin
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tubulin polymerization-IN-2 is a potent anticancer agent targeting to β-tubulin with an IC_{50} value of 0.92 μM. Tubulin polymerization-IN-2 shows promising activity against various leukemia, non-small lung, renal, prostate, and breast cancer cell lines[1].
IC_{50} & Target	IC50: 0.92 μM (tubulin)[1]
In Vitro	Tubulin polymerization-IN-2 (compound 2b) shows anti-cancer activity against epidermal carcinoma and breast carcinoma with IC_{50}s of 2.3 μM (KB) and 2.2 μM (BT-549), respectively[1]. Tubulin polymerization-IN-2 (0.342 μM; 24 h) inhibits DNA synthesis or repair, arrests cell cycle at S phase in MCF-7 cells[1]. Tubulin polymerization-IN-2 (0.342 μM; 24 h) induces cell apoptosis by decreasing Bax, APAF-1, and caspase-3 expression and increasing BCL-2 mRNA abundance[1]. Tubulin polymerization-IN-2 (0.01, 0.1, 1, 10 μM; 1 h) has strong interactions on β-tubulin polymerization, with K_i value of 0.09 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Elshemy HAH, et al. Development of potential anticancer agents and apoptotic inducers based on 4-aryl-4H chromene scaffold: Design, synthesis, biological evaluation and insight on their proliferation inhibition mechanism. Bioorg Chem. 2022 Jan;118:105475.

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