

WHN-11

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	WHN-11, an amino-Artemisinin derivative, exhibits anticancer activity against various cancer cell lines. It depletes cellular ATP, activates autophagy, and triggers apoptosis. WHN-11 disrupts cellular protein homeostasis pathways, inducing mitochondrial fission and dysfunction. Its anticancer effects are not associated with the generation of reactive oxygen species. WHN-11 is applicable for studies on triple-negative breast cancer (TNBC).
Targets(IC50)	Apoptosis, Autophagy
In vitro	WHN-11 demonstrates significant cytotoxicity toward several cancer cell lines, including HCC1937 (IC 50 = 0.74 μ M), HCC70 (0.19 μ M), MDA-MB-231 (0.5 μ M) triple-negative breast cancer cells, HeLa cervical cancer cells (0.84 μ M), U87 glioblastoma cells (6.57 μ M), 501mel melanoma cells (0.2 μ M), and HCT116 colon cancer cells (0.44 μ M). It inhibits tumor sphere formation in HCC1937 triple-negative breast cancer cells. WHN-11 (5-80 μ M, 9 days) significantly reduces colony formation of HCC1937 cells in a dose-dependent manner. Additionally, WHN-11 (1-50 μ M, 24 h) promotes caspase-3 cleavage without affecting RARP-1 in a dose-dependent fashion. WHN-11 does not alter the levels of ROS and NQO1 mRNA within HCC1937 cells but disrupts protein homeostasis, including ubiquitination and proteasome degradation. Moreover, WHN-11 (0.1-40 μ M, 1-16 h) activates apoptotic and autophagy signaling pathways in HCC1937 cells and induces mitochondrial stress and dysfunction with concentrations between 1-50 μ M.

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