NPI-2358 (Plinabulin)
Kinase Inhibitor

Kinase Inhibitor Name: NPI-2358 (Plinabulin)
Catalog Number: E1KS1176
Quantity: 5mg

1. PHYSICAL AND CHEMICAL PROPERTIES

   M.W.: 336.39
   Formula: C_{19}H_{20}N_{4}O_{2}
   Solubility: DMSO ≥67mg/mL  Water <1mg/mL  Ethanol <1mg/mL
   Purity: >99%
   Storage: at -20°C  2 years
   CAS No.: 714272-27-2
   M.W.: 336.39
   Molecular Structure:

2. Biological Activity

   NPI-2358 (Plinabulin) is a novel vascular disrupting agent (VDA) with an IC50 of 15 nM against HT-29 cells. NPI-2358 binds to the colchicine-binding site of tubulin. NPI-2358 has potent in-vitro anti-tumor activity against various human tumor cell lines and maintains activity against tumor cell lines with various MDR profiles. In addition, when evaluated in proliferating human umbilical vein endothelial cells (HUVECs), concentrations as low as 10 nmol/l NPI-2358 induced tubulin depolymerization within 30 min. Furthermore, NPI-2358 dose dependently increases HUVEC monolayer permeability—an in-vitro model of tumor vascular collapse. NPI-2358 blocks growth and angiogenesis in multiple myeloma cells.

   NPI-2358 acts on tubulin dimerization that destabilizes tumor vascular endothelial cells and has cytotoxic activity (IC50 values of 10-15 nM). NPI-2358 selectively induces tumor vascular collapse and tumor regression in murine tumor models and potentiates other oncology agents. Preclinical data suggest NPI-2358 may have advantages in terms of safety profile and activity. [1][2]

3. References:


The pharmacological and toxicological properties of this product have not been fully investigated. Exercise caution in use and handling. This product must not be used in humans.