

VEGFR-2-IN-71

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	VEGFR-2-IN-71 is a dual inhibitor of VEGFR2/tubulin. It suppresses tumor cell proliferation, induces apoptosis and cell cycle arrest, and inhibits angiogenesis in the chicken embryo chorioallantoic membrane (CAM) model. By targeting VEGFR2 and tubulin, VEGFR-2-IN-71 hinders tumor growth in the HGC-27 xenograft model. It exhibits low oral bioavailability in rats and is applicable in cancer research.
Targets(IC50)	Apoptosis, Microtubule Associated, VEGFR
In vitro	VEGFR-2-IN-71 (Compound 6r) exhibits antitumor activity and cytotoxicity against various cell lines, including HepG-2, HCT-116, HGC-27, MDA-MB-231, MCF-7, HA-VSMC, and GES-1, with IC50 values of 13.3 μ M, 18.8 μ M, 11.4 μ M, 21.8 μ M, 17.4 μ M, 17.1 μ M, and 16.73 μ M, respectively, over 48 hours with doses ranging from 1 to 128 μ M. It demonstrates antiproliferative effects on HGC-27 and HepG-2 cells, achieving complete inhibition at 1.0 μ M over 24 to 72 hours with doses of 0 to 2 μ M. Over a period of 10 days at concentrations of 0 to 1 μ M, VEGFR-2-IN-71 suppresses colony formation in HGC-27 and HepG-2 cells. In HGC-27 cells specifically, it inhibits VEGFR2 activity and exerts its antitumor effect by downregulating VEGF expression and regulating glycolysis-related enzymes HK2, PFKM, and PKM2. Additionally, it impedes tubulin polymerization and disrupts microtubule dynamics in HGC-27 and HepG-2 cells, inducing cell cycle arrest and apoptosis in HGC-27 cells.
In vivo	VEGFR-2-IN-71 (Compound 6r) at concentrations of 1-10 μ M, for a duration of 48 hours, can inhibit angiogenesis in the CAM model. Administered via intraperitoneal injection at doses of 15-30 mg/kg every other day for 16 days, VEGFR-2-IN-71 exhibits antitumor activity and angiogenesis inhibition in BALB/c nude mice with xenografted HGC-27 tumors. Additionally, when administered at doses of 20-100 mg/kg daily for 12 days, it does not harm the heart, liver, spleen, lungs, or kidneys, and shows no mortality, indicating a favorable safety profile.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286

E_mail: info@targetmol.com

Address: 34 Washington Street, Wellesley Hills, MA 02481