Chemical Properties

**Product Name:** Foretinib (GSK1363089)

**Chemical Name:** 1-N'-[3-fluoro-4-[6-methoxy-7-(3-morpholin-4-ylpropoxy)quinolin-4-yl]oxyphenyl]-1-N-(4-fluorophenyl)cyclopropane-1,1-dicarboxamide

**Canonical SMILES:** COC1=CC2=C(C=CN=C2C=C1OCCN3CCOCC3)OC4=C(C=C(C=C4)NC(=O)C5(CC5)C(=O)NC6=CC=C(C=C6)F)F

**Solubility:** $\geq 31.65\text{mg/mL}$ in DMSO

**Storage:** Store at -20°C

**General tips:** For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

**Shopping Condition:** Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

**Targets:** Tyrosine Kinase

**Pathways:** VEGFR

**Description:**
Foretinib (GSK1363089) is a novel, potent, small-molecule inhibitor of member of the vascular endothelial growth factor (VEGF) and hepatocyte growth factor (HGF) receptor tyrosine kinase families [1].
Foretinib inhibits Met, Ron, KDR, Flt-1, Flt-4, KIT, Flt-3, Platelet-derived growth factor receptor α, Platelet-derived growth factor receptor β and Tie-2 with IC50 values of 0.4, 3, 0.86, 6.8, 2.8, 6.7,
3.6, 3.6, 9.6 and 1.1 nmol/L, respectively. Foretinib has shown to inhibit cellular MET in murine B16F10 melanoma cells and PC-3 prostate cells with IC50 values of 21 and 23 nmol/L [1]. Foretinib revealed to inhibit the migration and invasion induced by HGF in murine B16F10 melanoma cells. Additionally, Foretinib suppressed the B16F10, A549 and HT29 tumor cells growth with IC50 values of 40, 29 and 165 nmol/L [1].

Reference:

Protocol

Cell experiment:

- **Cell lines**: SK-HEP1 cells
- **Preparation method**: The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
- **Reacting conditions**: 1 μM, 48 hours for cell number inhibition 1 μM, 24 hours for cell motility inhibition and cell cycle arrest
- **Applications**: Treatment of SK-HEP1 cells with 0.25, 0.5, 1 and 1.5 μM foretinib resulted in 30, 60, 68 and 70% reduction in cell number, respectively when analyzed on day 2. Maximal inhibition was observed at approximately 1 μM. Foretinib also blocked HGF-induced cell motility and caused G2/M phase arrest with reduction in the G0/G1 and S phases.

Animal experiment [3]:

- **Animal models**: Female athymic nude mice injected with SKOV3ip1 or HeyA8 cells
- **Dosage form**: Oral administration, 30 mg/kg, 6 days/week for 21 days (SKOV3ip1) Oral administration, 30 mg/kg, 6 days/week for 16 days (HeyA8)
- **Applications**: In the SKOV3ip1 xenograft model, Foretinib reduced the number of metastatic tumor nodules (30 mg/kg: 67% inhibition) and tumor weight (30 mg/kg: 86% inhibition) in a dose-dependent fashion.
Similar effects were also seen in a second xenograft model by HeyA8 cells in reduction of tumor weight (30 mg/kg: 71% inhibition).

Other notes
Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Reference:

Product Citations

Caution
FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.
Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.