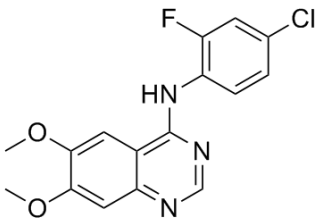
ZM 306416

Cat. No.:	HY-13785
CAS No.:	690206-97-4
Molecular Formula:	$C_{16}H_{13}ClFN_3O_2$
Molecular Weight:	333.74
Target:	VEGFR
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (**149.82 mM;** Need ultrasonic)
H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9963 mL	14.9817 mL	29.9634 mL
	5 mM	0.5993 mL	2.9963 mL	5.9927 mL
	10 mM	0.2996 mL	1.4982 mL	2.9963 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.5 mg/mL (7.49 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.5 mg/mL (7.49 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ZM-306416 (CB 676475) is a potent inhibitor of **VEGFR** with **IC_{50}**s of 0.1 and 2 μM for KDR and Flt, respectively. ZM-306416 is also a **EGFR** inhibitor with an **IC_{50}** of <10 nM.

IC_{50} & Target	KDR	Flt-1
	100 nM (IC_{50})	2 μM (IC_{50})

In Vitro

ZM-306416 selective anti-proliferative effect toward the EGFR addicted NSCLC cell lines H3255 and HCC4011 (IC_{50} =0.09±0.007 μM and 0.072±0.001 μM respectively), while sparing the wild type EGFR cell lines A549 and H2030 (IC_{50}

>10 μM). ZM-306416 is also found to inhibit the ABL in vitro kinase activity with a less potent IC_{50} value of 1.3±0.2 μM toward the ABL kinase[2].

CUSTOMER VALIDATION

- **J Neurosci**. 2019 Jul 24;39(30):6012-6030.

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REFERENCES

[1]. Han SY, Park SS, Lee WG, Synthesis of a novel biotin-tagged photoaffinity probe for VEGF receptor tyrosine kinases. Bioorg Med Chem Lett. 2006 Jan 1;16(1):129-33.

[2]. Antczak C, Mahida JP, Bhinder B, A high-content biosensor-based screen identifies cell-permeable activators and inhibitors of EGFR function: implications in drug discovery. J Biomol Screen. 2012 Aug;17(7):885-99.

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