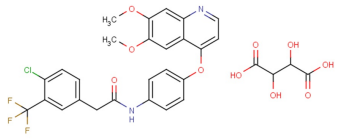
Data Sheet (Cat.No.T19223)

TargetMol
A DRUG SCREENING EXPERT

c-Kit-IN-3 tartrate

Chemical Properties



CAS No.:	T19223
Formula:	C30H26ClF3N2O10
Molecular Weight:	666.98
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	c-Kit-IN-3 tartrate is a potent and selective c-KIT kinase inhibitor (IC50s: 4 nM, 8 nM for c-KIT wt, and c-KIT T670I).
Targets(IC_{50})	BaF3-tel-c-KIT: 4 nM BaF3-tel-c-KIT-T670I: 8 nM
In vitro	c-Kit-IN-3 tartrate (Compound 18; 0.1-10 μM; 6 days; primary GIST patient cells) exhibits dose-dependent antiproliferative effects. c-Kit-IN-3 (0.01-1 μM; 24 hours; GIST-T1, GIST-T1-T670I, and GIST-5R cells) treatment induces dose-dependent cell apoptotic death. c-Kit-IN-3 (0.01-1 μM; 24 hours; GIST-T1, GIST-T1-T670I, and GIST-5R cells) treatment arrests the cell cycle into the G0/G1 phase in all of these three cell lines. c-Kit-IN-3 (0-1 μM; 24 hours) blocks the autophosphorylation of c-KIT pY703, pY719, and pY823 in GIST-T1, GIST-T1-T670I, and GIST-5R, respectively, cells at a concentration of 30 nM and inhibits the downstream signaling mediators pAKT (T308/S473), pS6 (S235/236), and pERK (T202/204). c-Kit-IN-3 potently inhibits the activity of CSF1R (IC50: 18 nM), PDGFRα (IC50: 25 nM), RET (IC50: 34 nM), and it relatively less potently inhibits DDR1 (IC50: 135 nM), FLT4 (IC50: 121 nM), and PDGFRβ (IC50: 97 nM). c-Kit-IN-3 (0.006 μM-1.37 μM) potently inhibits the growth of c-KIT-dependent GIST cancer cells, such as GIST-T1 (IC50: 0.006 μM); GIST-882 (IC50: 0.013 μM); GIST-T1-T670I (IC50 : 0.011 μM); GIST-5R (IC50: 0.073 μM); GIST-48B (IC50: 1.37 μM), respectively.
In vivo	c-Kit-IN-3 tartrate (oral gavage; 20-100 mg/kg/day; for 11 days; female BALB/C-nu mice) treatment dose-dependently inhibits the tumor progression. c-Kit-IN-3 (1 mg/kg iv for mice, rats, dog; 10 mg/kg p.o. for mice, rats; and 5 mg/kg p.o. for dog) has T1/2 of 4.5 h, 6.4 h, 19.4 h for mice, rats and dogs, respectively. And it possesses acceptable bioavailability in mice (F = 43%), rats (F = 50%), and dogs (F = 81%).

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.499 mL	7.496 mL	14.993 mL
5 mM	0.3 mL	1.499 mL	2.999 mL
10 mM	0.15 mL	0.75 mL	1.499 mL
50 mM	0.03 mL	0.15 mL	0.3 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Wu Y, et al. Discovery of 2-(4-Chloro-3-(trifluoromethyl)phenyl)-N-(4-((6,7-dimethoxyquinolin-4-yl)oxy)phenyl)acetamide (CHMFL-KIT-64) as a Novel Orally Available Potent Inhibitor against Broad-Spectrum Mutants of c-KIT Kinase for Gastrointestinal Stromal Tumors. J Med Chem. 2019 Jul 11;62(13):6083-6101.

Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481