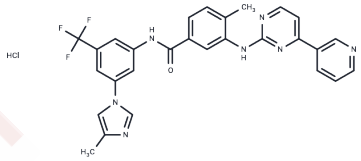
Data Sheet (Cat.No.T22378)

TargetMol

Nilotinib hydrochloride

Chemical Properties



CAS No. : 923288-95-3

Formula: C28H23ClF3N7O

Molecular Weight: 565.98

Storage: Store at low temperature
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	Nilotinib hydrochloride(AMN-107 HCl) is an orally available Bcr-Abl tyrosine kinase inhibitor with antitumor activity for modulation of neuroinflammation and cognitive deficits, and may be used in studies of chronic myelogenous leukemia.
Targets(IC50)	Bcr-Abl,Autophagy
In vitro	Nilotinib hydrochloride (AMN107 hydrochloride) is a selective Abl inhibitor designed to interact with the ATP binding site of BCR-ABL with higher affinity than imatinib while being more potent than imatinib (IC50<30 nM), also retains activity against most BCR-ABL point mutants that confer resistance to imatinib.[1] Nilotinib hydrochloride showed significant anti-tumor efficacy against GIST xenograft cell lines and imatinib-resistant GIST cell lines, among which the parental cell lines GK1C and GK3C showed imatinib sensitivity with IC50 of 4.59±0.97 μM and 11.15±1.48 μM, respectively.[2]
In vivo	Nilotinib hydrochloride (AMN107 hydrochloride) (40 mg/kg; oral gavage; daily; for 4 weeks; BALB/cSLc-nu/nu mice with GIST xenograft) demonstrated equivalent or superior antitumor effects in BALB/cSLc-nu/nu mice with GIST xenografts. Nilotinib hydrochloride Inhibited tumor growth by 69.6% in GK1X, 85.3% in GK2X, and 47.5% in GK3X xenograft line.[2] Nilotinib hydrochloride exerts significant healing effects on macroscopic and microscopic pathology scores in a rat model of indomethacin-induced enterocolitis and ensures considerable mucosal healing while reducing PDGFR alpha and beta levels and apoptosis in the colon Rating.[3]

Solubility Information

Solubility	DMSO: 90 mg/mL (159.02 mM),Sonication is recommended. Ethanol: 1 mg/mL (1.77 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7668 mL	8.8342 mL	17.6685 mL
5 mM	0.3534 mL	1.7668 mL	3.5337 mL
10 mM	0.1767 mL	0.8834 mL	1.7668 mL
50 mM	0.0353 mL	0.1767 mL	0.3534 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Weisberg E, et al. Beneficial effects of combining nilotinib and imatinib in preclinical models of BCR-ABL+ leukemias. Blood. 2007 Mar 1;109(5):2112-20.
Sako H, et al. Antitumor effect of the tyrosine kinase inhibitor Nilotinib on gastrointestinal stromal tumor (GIST) and Imatinib-resistant GIST cells. PLoS One. 2014 Sep 15;9(9):e107613.
Dervis Hakim G, et al. Mucosal healing effect of nilotinib in indomethacin-induced enterocolitis: A rat model. World J Gastroenterol. 2015 Nov 28;21(44):12576-85.