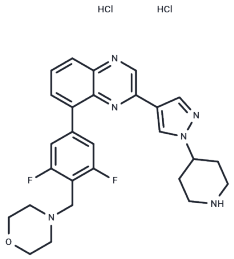
Data Sheet (Cat.No.T6294)

TargetMol

NVP-BSK805 2HCl (1092499-93-8(free base))

Chemical Properties



CAS No. :

Formula: C27H28F2N6O·2HCl

Molecular Weight: 563.47

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	NVP-BSK805 2HCl (1092499-93-8(free base)) (BSK 805)(IC50=0.5 nM), a specific and effective ATP-competitive JAK2 inhibitor, is more than 20-fold specificity over JAK1, JAK3 and TYK2.
Targets(IC50)	JAK,Tyrosine Kinases
In vitro	NVP-BSK805 is found to potently inhibit JAK2, whereas displaying more than 20-fold selectivity towards JAK1, JAK3, and TYK2. NVP-BSK805 causes half-maximal inhibition of full-length JAK2V617F and JAK2 wild-type enzymes at 0.5 nM. NVP-BSK805 blocks the growth of JAK2V617F cells (Ba/F3) and induces apoptosis with a GI50 at concentrations < 100 nM. As constitutive STAT5 phosphorylation in dependent on JAK2, NVP-BSK805 is found to potently suppress STAT5 phophorylation at ≥ 100 nM concentrations in the JAK2 V617F -mutant cell lines, like MB-02. Incubation of SET-2 cells with 150 nM and 1 μM of NVP-BSK805, which corresponds to concentration yielding 75% and 95% growth inhibition, respectively, for 24, 48, and 72 hours lead to concentration- and time-dependent induction of apoptosis. These results are evidenced by the detection of cleaved PARP, reduced Bcl-xL expression, and a strong increase in the number of cells with less than 2N DNA content. [1] NVP-BSK805 triggered cell death requires activation of caspase cascades and is overcome by caspase inhibition in both SET-2 and MB-02 cells. NVP-BSK805 modulates the post-translational modification of Bim and levels of Mcl-1 in JAK2V617F cells, SET-2 and MB-02 cells. [2]
In vivo	Oral bioavailability of NVP-BSK805 in mice is estimated to be 45%, while it is 50% in rats. Oral administration of NVP-BSK805 at 150 mg/kg suppresses STAT5 phosphorylation, splenomegaly, and leukemic cell spreading in a Ba/F3 JAK2V617F cell-driven mouse model. NVP-BSK805 suppresses rhEpo-induced STAT5 phosphorylation as well as rhEpo-mediated polycythemia and splenomegaly in BALB/c mice at doses of 25, 50, and 100 mg/kg orally. [1]
Cell Research	The anti-proliferative activity of JAK2 inhibitors is determined by incubating cells for 72 hours with an 8-point concentration range of compound and cell proliferation relative to DMSO-treated cells is measured using the colorimetric WST-1 (Roche Diagnostics GmbH) cell viability readout. Of each triplicate treatment, the mean is calculated and these data are plotted in XLfit 4 (ID Business Solutions, Ltd.) to determine the half-maximal growth inhibition (GI50) values.(Only for Reference)

Solubility Information

Solubility	H2O: 3 mg/mL (5.32 mM),Sonication is recommended. DMSO: 113 mg/mL (200.54 mM),Sonication is recommended. Ethanol: 15 mg/mL (26.62 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7747 mL	8.8736 mL	17.7472 mL
5 mM	0.3549 mL	1.7747 mL	3.5494 mL
10 mM	0.1775 mL	0.8874 mL	1.7747 mL
50 mM	0.0355 mL	0.1775 mL	0.3549 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.

Reference

Baffert F, et al. Mol Cancer Ther, 2010, 9(7), 1945-1955.
Rubert J, et al. BMC Cancer, 2011, Jan(19), 11-24.

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