

Product Datasheet

NVP-BSK805 dihydrochloride

Catalog No. **BP-02300A** · CAS **1942919-79-0** · Form **salt · dihydrochloride** · Physical state **other** · Version **1.0** · Revision **2026-09-10**

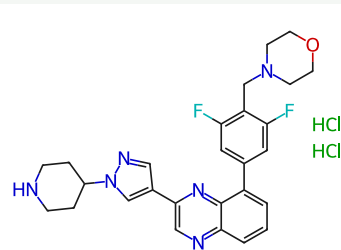
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Target JAK	Research area Cancer
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Molecular formula **C₂₇H₃₀Cl₂F₂N₆O**

Molecular weight **563.4700**

STRUCTURE



DESCRIPTION

NVP-BSK805 dihydrochloride is an ATP-competitive JAK2 inhibitor, with IC₅₀s of 0.48 nM, 31.63 nM, 18.68 nM, and 10.76 nM for JAK2 JH1 (JAK homology 1), JAK1 JH1, JAK3 JH1, and TYK2 JH1, respectively.

BIOLOGICAL ACTIVITY

NVP-BSK805 dihydrochloride is a potent and selective quinoxaline JAK2 inhibitor with IC₅₀ values of 0.48, 0.56 and 0.58 nM for JAK2 JH1, FL JAK V617F and FL JAK2 wt respectively. Within the JAK family, NVP-BSK805 displays more than 20-fold selectivity towards JAK2 in vitro, as well as excellent selectivity in broader kinase profiling. The compound blunts constitutive STAT5 phosphorylation in JAK2(V617F)-bearing cells, with concomitant suppression of cell proliferation and induction of apoptosis. In vivo, NVP-BSK805 exhibited good oral bioavailability and a long half-life. The inhibitor was efficacious in suppressing leukemic cell spreading and splenomegaly in a Ba/F3 JAK2(V617F) cell-driven mouse mechanistic model. Furthermore, NVP-BSK805 potently suppressed recombinant human erythropoietin-induced polycythemia and extramedullary erythropoiesis in mice and rats.

SOLUBILITY

Soluble in DMSO, H₂O

In vitro DMSO : 50 mg/mL H₂O : < 0.1 mg/mL

REFERENCES

- [1]. Baffert F, et al. Potent and selective inhibition of polycythemia by the quinoxaline JAK2 inhibitor NVP-BSK805. Mol Cancer Ther. 2010 Jul;9(7):1945-55.
- [2]. Cheon JH, et al. The JAK2 inhibitors CEP-33779 and NVP-BSK805 have high P-gp inhibitory activity and sensitize drug-resistant cancer cells to vincristine. Biochem Biophys Res Commun. 2017 Sep 2;490(4):1176-1182.

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