Product Datasheet

ASP3026

Catalog No. **BP-02463** · CAS **1097917-15-1** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-10**

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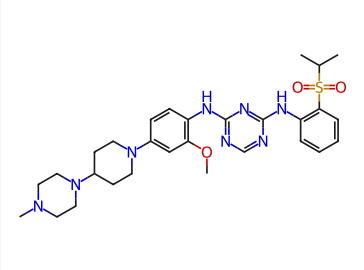
Target	Research area
Anaplastic lymphoma kinase (ALK); Apoptosis; ROS Kinase; Caspase; PARP; IGF-1R; STAT; Akt; JNK	**Cancer**

Molecular formula	$C_{29}H_{40}N_8O_3S$
Molecular weight	**580.7450**

STRUCTURE



DESCRIPTION

ASP3026 is a selective and orally active inhibitor of anaplastic lymphoma kinase (ALK). ASP3026 is a selective and oral active anaplastic lymphoma kinase (ALK) inhibitor with a IC50 value of 3.5 nM. ASP3026 can inhibit the phosphorylation of IGF-1R, STAT3, AKT and JNK proteins, and induce the cleavage of caspase 3 and PARP. It also inhibited ROS and ACK. ASP3026 can be used in anti-tumor research .

BIOLOGICAL ACTIVITY

In Vitro

ASP3026 decreases the viability, proliferation, and colony formation, as well as induced apoptotic cell death of NPM-ALK+ ALCL cells.

ASP3026 significantly reduces the proliferation of 293T cells transfected with NPM-ALK mutants that are resistant to Crizotinib (HY-50878) and downregulates tyrosine phosphorylation of these mutants.

ASP3026 (1-4 μg/ml, 48 h) is a novel inhibitor of red blood cell membrane scrambling following energy depletion and oxidative stress, thereby counterbalancing suicidal red blood cell death and subsequent development of anemia.

ASP3026 (100 nM, 1000 nM, 5 days) inhibits ALK activity in a competitive manner with ATP, and its inhibition profile is different from that of the dual ALK/MET inhibitor Crizotinib (HY-50878).

In Vivo

ASP3026 (30 mg/kg daily for 10 weeks, p.o.) inhibits the growth of NPM-ALK+ ALCL tumor cells in mice[2].

ASP3026 (10 mg/kg daily for 5 days, p.o.) can enhance the antitumor activity of Paclitaxel (HY-B0015) and

Pemetrexed (HY-10820). When used alone, it can induce tumor regression and prolong survival in non-small cell lung cancer model mice, and does not affect the body weight of non-small cell lung cancer model mice.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1].Discovery of Iikubo K, et, al. N-{2-Methoxy-4-[4-(4-methylpiperazin-1-yl)piperidin-1-yl]phenyl}-N'-[2-(propane-2-sulfonyl)phenyl]-1,3,5-triazine-2,4-diamine (ASP3026), a Potent and Selective Anaplastic Lymphoma Kinase (ALK) Inhibitor. Chem Pharm Bull (Tokyo). 2018;66(3):251-262.

[2].George SK, et, al. The ALK inhibitor ASP3026 eradicates NPM-ALK$^+$ T-cell anaplastic large-cell lymphoma in vitro and in a systemic xenograft lymphoma model. Oncotarget. 2014 Jul 30;5(14):5750-63.

[3].Bhuyan AAM, et, al. Inhibition of Erythrocyte Cell Membrane Scrambling by ASP3026. Cell Physiol Biochem. 2017;43(2):507-517.

[4].Mori M, et al. The selective anaplastic lymphoma receptor tyrosine kinase inhibitor ASP3026 induces tumor regression and prolongs survival in non-small cell lung cancer model mice. Mol Cancer Ther. 2014 Feb;13(2):329-40.