产品名称：
(S)-5-fluoro-2-(1-(4-fluorophenyl)ethylamino)-6-(5-methyl-1H-pyrazol-3-ylamino)nicotinonitrile
产品别名：**AZ960**

生物活性：

Description	AZ960 is a potent and specific inhibitor of the JAK2 kinase with a K_i of 0.45 nM.		
IC_{50} & Target	JAK2	JAK2	JAK3
	0.45 nM (Ki)	<3 nM (IC_{50})	9 nM (IC_{50})
In Vitro	AZ960 inhibits Jak2 kinase with a Ki of 0.45 nM. Z960 possesses much less potent activity against Jak1, 3, and TYK2. AZ960 is active against other kinases, including TrkA, Aurora-A, and FAK, with IC_{50} of around 0.1 μM. AZ960 effectively induces growth arrest and apoptosis of human T-cell lymphotropic virus type 1, HTLV-1–infected T cells (MT-1 and MT-2) in parallel with downregulation of the phosphorylated forms of Jak2 and Bcl-2 family proteins including Bcl-2 and Mcl-1[2]. AZ960 potently inhibits the clonogenic growth and induces apoptosis of freshly isolated acute myelogenous leukemia cells from patients in association with cleavage of caspase 3 and down regulation of anti-apoptotic Bcl-xL proteins[1]. AZ960 has a Ki of 1.25 μM for T. brucei extracellular signal-regulated kinase 8 (TbERK8). It inhibits TbERK8 with an IC50 of 120 nM[3]..		

Solvent&Solubility

In Vitro:

DMSO : ≥ 30 mg/mL (84.66 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8220 mL	14.1099 mL	28.2199 mL
	5 mM	0.5644 mL	2.8220 mL	5.6440 mL
	10 mM	0.2822 mL	1.4110 mL	2.8220 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 **In Vitro** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline

Solubility: ≥ 2.5 mg/mL (7.05 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (7.05 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。

2.请依序添加每种溶剂： 10% DMSO →90% corn oil

Solubility: ≥ 2.5 mg/mL (7.05 mM); Clear solution

	此方案可获得 ≥ 2.5 mg/mL (7.05 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀
References	[1]. Ikezoe T, et al. Expression of p-JAK2 predicts clinical outcome and is a potential molecular target of acute myelogenous leukemia. Int J Cancer. 2011 Nov 15;129(10):2512-21. [2]. Gozgit JM, et al. Effects of the JAK2 inhibitor, AZ960, on Pim/BAD/BCL-xL survival signaling in the human JAK2 V617F cell line SET-2. J Biol Chem. 2008 Nov 21;283(47):32334-43. [3]. Yang J, et al. AZ960, a novel Jak2 inhibitor, induces growth arrest and apoptosis in adult T-cell leukemia cells. Mol Cancer Ther. 2010 Dec;9(12):3386-95. [4]. Valenciano AL, et al. Discovery and antiparasitic activity of AZ960 as a Trypanosoma brucei ERK8 inhibitor. Bioorg Med Chem. 2016 Oct 1;24(19):4647-51.

实验参考：

Cell Assay	AZ960 is dissolved in 100% DMSO to a 0.01 M. HTLV-1–infected T cells and MOLT-4 cells are cultured with various concentrations of AZ960 (0.03-1 μM) for 2 days in 96-well plates. Peripheral blood lymphocytes are activated by phytohemagglutinin (PHA; 5 ng/mL) for 1 hour, then cultured with various concentrations of AZ960 (0.03–1 μM) for 2 days in 96-well plates. After culture, cell number and viability are evaluated by measuring the mitochondrial-dependent conversion of the MTT to a colored formazan product[2].
References	[1]. Ikezoe T, et al. Expression of p-JAK2 predicts clinical outcome and is a potential molecular target of acute myelogenous leukemia. Int J Cancer. 2011 Nov 15;129(10):2512-21. [2]. Gozgit JM, et al. Effects of the JAK2 inhibitor, AZ960, on Pim/BAD/BCL-xL survival signaling in the human JAK2 V617F cell line SET-2. J Biol Chem. 2008 Nov 21;283(47):32334-43. [3]. Yang J, et al. AZ960, a novel Jak2 inhibitor, induces growth arrest and apoptosis in adult T-cell leukemia cells. Mol Cancer Ther. 2010 Dec;9(12):3386-95. [4]. Valenciano AL, et al. Discovery and antiparasitic activity of AZ960 as a Trypanosoma brucei ERK8 inhibitor. Bioorg Med Chem. 2016 Oct 1;24(19):4647-51.