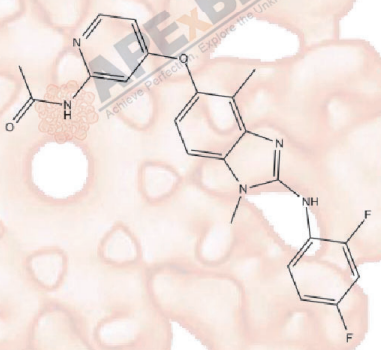
Product Data Sheet

CHZ868



Cat. No.:	B5980
CAS No.:	1895895-38-1
Formula:	C22H19F2N5O2
M.Wt:	423.42
Synonyms:	
Target:	Chromatin/Epigenetics
Pathway:	JAK
Storage:	Store at -20° C

Solvent & Solubility

In Vitro

Soluble in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	2.3617 mL	11.8086 mL	23.6172 mL
5 mM	0.4723 mL	2.3617 mL	4.7234 mL
10 mM	0.2362 mL	1.1809 mL	2.3617 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Type II JAK2 inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	CRLF2-rearranged human B-ALL cells MHH-CALL4, JAK2V617F SET2 cells, MPLW515L mutant cells
Preparation method:	Soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0.25-1 μM
Applications:	In CRLF2-rearranged human B-ALL cells MHH-CALL4, CHZ868 potently

		inhibited JAK2 phosphorylation and cell growth. In JAK2V617F SET2 cells, CHZ868 (0.25-1 μM) potently inhibited constitutive JAK2 and STAT5 phosphorylation, and inhibited cell proliferation with GI50 of 59 nM. In MPLW515L mutant cells, CHZ868 potently inhibited cell proliferation and abrogated phosphorylation of Y1007/Y1008 in the JAK2 activation loop. In type I JAK inhibitor-persistent cells, CHZ868 dose-dependently inhibited JAK2 phosphorylation and proliferation of JAK2V617F or MPLW515L cells.
In Vivo	**Animal experiment**	
	Animal models:	Jak2V617F conditional knock-in mice
	Dosage form:	30-40 mg/kg orally once daily
	Applications:	CHZ868 normalized spleen and liver weights, demonstrating marked inhibition of extramedullary hematopoiesis. CHZ868 therapy reduced the bone marrow megakaryocytic hyperplasia. In a murine model of PMF-like disease, CHZ868 (40 mg/kg) therapy significantly improved survival of mice with MPLW515L-induced myelofibrosis and dose-dependently reduced hepatomegaly and normalized spleen weight and size. CHZ868 therapy markedly decreased bone marrow and spleen reticulin fibrosis.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Tvorogov D, Thomas D, et al. "Accumulation of JAK activation loop phosphorylation is linked to type IJAK inhibitor withdrawal syndrome in myelofibrosis." Sci Adv. 2018 Nov28;4(11):eaat3834.PMID:30498775

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References

[1]. Meyer S C, Keller M D, Chiu S, et al. CHZ868, a type II JAK2 inhibitor, reverses type I JAK inhibitor persistence and demonstrates efficacy in myeloproliferative neoplasms[J]. Cancer cell, 2015, 28(1): 15-28.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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