BTK-IN-18

Cat. No.: HY-152201

CAS No.: 1374239-71-0

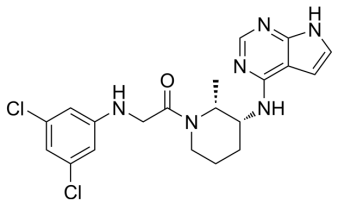
Molecular Formula: $C_{20}H_{22}Cl_2N_6O$

Molecular Weight: 433.33

Target: Btk

Pathway: Protein Tyrosine Kinase/RTK

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

BTK-IN-18 is a potent, reversible BTK inhibitor with an IC_{50} of 0.002 μM. BTK-IN-18 inhibits both CD69 and CD86 in vivo[1].

In Vivo

BTK-IN-18 (compound 41; 10, 25, 45 mg/kg; IP; single dose) causes robust dose-dependent inhibition of both CD69 and CD86 [1].

BTK-IN-18 (iv; 1 mg/kg) has a $T_{1/2}$ of 5.3 hours, a CL of 19 mL/min/kg, and a V_{ss} of 1.3 L/kg for rats[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Mice[1]
Dosage:	10, 25, 45 mg/kg
Administration:	IP; single dose
Result:	Caused robust dose-dependent inhibition of both CD69 and CD86 (74.8 %, 50.3 %, and 21.5 % respectively).

Animal Model:	
Dosage:	
Administration:	
Result:	Pharmacokinetic Parameters of BTK-IN-18 in rats[1].

	IV (1 mg/kg)	PO (5 mg/kg)
T_{max} (h)		1.6
C_{max} (h⊠mg/mL)	321	
AUC_{infi} (h⊠mg/mL)	1013	1421

$t_{1/2}$ (ng/mL)	5.3	
CL (mL/min/kg)	19	
V_{ss} (L/kg)	1.3	
F (%)	23%	

REFERENCES

[1]. George H Vandeveer, et al. Discovery of structural diverse reversible BTK inhibitors utilized to develop a novel in vivo CD69 and CD86 PK/PD mouse model. Bioorg Med Chem Lett. 2022 Dec 17;80:129108.

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