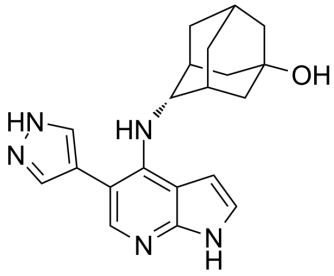
JAK1-IN-12

Cat. No.:	HY-149296
CAS No.:	2945204-95-3
Molecular Formula:	$C_{20}H_{23}N_5O$
Molecular Weight:	349.43
Target:	JAK
Pathway:	Epigenetics; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	JAK1-IN-12 is a selective inhibitor of JAK1, with IC_{50} of 0.0246 μM. And IC_{50}s of 0.423 μM, 0.410 μM and 1.12 μM for JAK2, JAK3 and TYK2. JAK1-IN-12 promotes hair growth in mice. JAK1-IN-12 can be used for research of immune and inflammatory diseases[1].

IC_{50} & Target	JAK1	JAK2	JAK3	Tyk2
	0.0246 μM (IC_{50})	0.423 μM (IC_{50})	0.410 μM (IC_{50})	1.12 μM (IC_{50})

In Vitro

HDAC-IN-57 (Compound 12b) inhibits JAK1 and JAK2 activity in Ba/F3-TEL-JAK1 cell lines, with IC_{50} of 0.110 μM and 6.105 μM [1].

HDAC-IN-57 (Compound 12b) (1 μM) showed strong interaction with JAK1, JAK3, PKD2, HPK1, AurB in vitro panel assay[1].

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

In Vivo

JAK1-IN-12 (Compound 12b) (2%, in 10% DMSO solution, daily to half of the shaved area for 1 month) promotes hair growth in the shaved area of the dorsal back of 8-week-old C57/B6 mice[1].

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

Animal Model:	C57/B6 mice[1]
Dosage:	2% in 10% DMSO solution
Administration:	External use; applied daily for 1 month
Result:	Promoted skin darkening within 9 days and new hair growth within 13 days in shaved area of the dorsal back of C57/B6 mice

REFERENCES

[1]. Lang JJ, et al. Discovery of C-5 Pyrazole-Substituted Pyrrolopyridine Derivatives as Potent and Selective Inhibitors for Janus Kinase 1. J Med Chem. 2023 May 25;66(10):6725-6742.

Caution: Product has not been fully validated for medical applications. For research use only.

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