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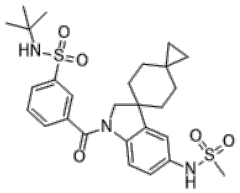
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	VLS-1272
Cat. No.	:	PC-23792
CAS No.	:	2914878-00-3
Molecular Formula	:	$C_{27}H_{35}N_3O_5S_2$
Molecular Weight	:	545.71
Target	:	Kinesin
Solubility	:	10 mM in DMSO



Biological Activity

VLS-1272 is a potent, ATP non-competitive, orally bioavailable, and highly selective inhibitor of KIF18A ATPase activity with IC50 of 41 nM and 8.8 nM for human and murine KIF18A (0.1 mM ATP), respectively.
VLS-1272 is an allosteric inhibitor of KIF18A.
VLS-1272 is selective for KIF18A over other kinesins, with no inhibition of KIF11/Eg5, KIF18B, or KIFC1 at 100 μM, and an IC50 of 280 nM against KIF19.
VLS-1272 prevents cell proliferation to a greater degree in the CINHigh (KIF2A over-expressing) vs. CINLow (KIF2B over-expressing) MDA-MB-231 cell line pair.
VLS-1272 demonstrates that the specificity towards cancer cells with chromosome instability differentiates KIF18A inhibition from other clinically tested anti-mitotic drugs.
VLS-1272 also induced Caspase-3 cleavage in the sensitive OVCAR-3 cell line but not in the insensitive CAL51 cell line. VLS-1272 (30-60 mg/kg, BID, PO) exhibited robust dose-dependent inhibition of tumor growth in HCC15 and OVCAR-3 tumor models.

References

Phillips AF, et al. Nat Commun. 2025 Jan 2;16(1):307.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

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