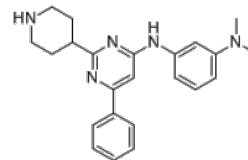


Product Name : ARN22089
Cat. No. : PC-38415
CAS No. : 2248691-29-2
Molecular Formula : C₂₃H₂₇N₅
Molecular Weight : 373.504
Target : Small GTPase
Solubility : 10 mM in DMSO



Biological Activity

ARN22089 (ARN 22089) is a specific small molecule inhibitor of putative **CDC42** family effector interaction, binds to CDC42 and has broad anti-cancer activity and inhibits MAPK and S6 signaling.

ARN22089 could inhibit CDC42-PAK interactions with EC₅₀ of 0.1 uM, and inhibit RHOJ/PAK interactions with approximate EC₅₀ of 1-5 uM.

ARN22089 has a single-digit micromolar IC₅₀ activity against sensitive cell lines (WM3248, SKMel3, A375, and SW480), has IC₅₀ of < 10 uM for 55/100 cell lines in a panel of 100 cancer cell lines with various different mutations, including several cell lines with neuroblastoma RAS (NRAS) mutations.

ARN22089 inhibits MAPK and S6 phosphorylation and influences NFκB signaling in vitro.

ARN22089 specifically inhibits tumor angiogenesis in 3D vascularized microtumors, shows drug-like properties and inhibits tumor growth in vivo.

ARN22089 selectively binds and inhibits CDC42 effector interactions.

ARN22089 binds better to the purified CDC42 compared with other known CDC42 inhibitors (ZCL278, ML141, R-ketoralac, and Casin).

CDC42 family GTPases (RHOJ, RHOQ, CDC42) are linked to multiple human cancers and modulate cell-cycle progression, tumor cell migration/invasion, and tumor angiogenesis.

References

Jahid S, et al. *Cell Rep.* 2022 Apr 5;39(1):110641.

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

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