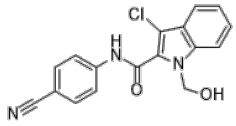
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Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	ADAR1i-124
Cat. No.	:	PC-25996
CAS No.	:	
Molecular Formula	:	$C_{17}H_{12}ClN_3O_2$
Molecular Weight	:	325.75
Target	:	Other Targets
Solubility	:	10 mM in DMSO



Biological Activity

ADAR1i-124 is a selective inhibitor of the **ADAR1 A-to-I RNA editing** activity with in vitro editing IC50 values of 10-30 uM, inhibits the catalytic activities of both **ADAR1p150** and **ADAR1p110**.
ADAR1i-124 shows no substantial ADAR2 inhibitory activity at 300 μM.
ADAR1i-124 shows direct binding to ADAR1 with SPR Kd of 9.6 uM.
ADAR1i-124, like siAdar1, prompted the transition of certain dsRNAs from A-form to Z-form, reduced targeted mRNAs (Wdr76, Iws1, and Gnl3l), inhibited A-to-I editing at LTR- and SINE-dsRNA target sites.
ADAR1i-124 exhibits potent cytotoxicity against HeLa cells, with an IC50 of 0.17 uM, also induced DNA damage, M phase arrest, and apoptosis along with an increase in R-loop (RNA: DNA hybrid) formation.
ADAR1i-124 induces dose-dependent cytotoxicity in various mouse and human cancer cell lines (HGS2 ovarian cancer cell, IC50=1.2 uM), upregulates expression of IFN-stimulated genes (ISGs) such as Ifih1 (MDA5), Cxcl9, and Cxcl10 in Yumm1.7 melanoma and HGS2 ovarian cancer (OC) cells, indicating that ADAR1i-124 activates IFN signaling.
ADAR1i-124 induces IFN signaling through the MDA5 and ZBP1 pathways.
ADAR1i-124 inhibits only the A-to-I editing activity but not the dsRNA-binding functions of ADAR1.
DNA methylation inhibitor 5-Aza-CdR enhances the efficacy of ADAR1i-124 in dose-dependent eradication of certain cancer cell lines less responsive to ADAR1i-124 alone.

References

Minakuchi M, et al. ***iScience***. 2026 Jan 2;29(2):114615.

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

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