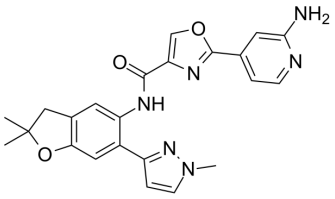
IRAK4-IN-27

Cat. No.:	HY-155574
Molecular Formula:	$C_{23}H_{22}N_6O_3$
Molecular Weight:	430.46
Target:	IRAK; Apoptosis
Pathway:	Immunology/Inflammation; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	IRAK4-IN-27 (Compound 22) is a potent, selective inhibitor of IRAK4, with IC_{50} of 8.7 nM. IRAK4-IN-27 inhibits cell growth, and promotes apoptosis in MYD88 L265P diffuse large B-cell lymphoma (DLBCL) cell line. IRAK4-IN-27 can be used for DLBCL study[1].
IC_{50} & Target	IRAK4 8.7 nM (IC_{50})
In Vitro	IRAK4-IN-27 (Compound 22, 72 h) shows antiproliferative activity against MYD88 L265P DLBCL cell line (OCI-LY10, IC_{50} = 0.248 μM) and MYD88 WT cell lines (U2932, IC_{50} = 1.251 μM, and GM00637, IC_{50} = 1.520 μM) [1]. IRAK4-IN-27 (0.5 and 1 μM, 24 and 48 h) induces apoptosis in OCI-LY10 cells[1]. IRAK4-IN-27 (0.03-3 μM) inhibits phosphorylation of IRAK4 and downstream signaling in OCI-LY10 cells[1]. IRAK4-IN-27 (0.1 and 0.2 μM, 48 h) in combination with Ibrutinib (HY-10997) inhibits cell growth, but induces apoptosis in OCI-LY10 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1]

Cell Line:	OCI-LY10 cells
Concentration:	0, 0.1, 0.2, 0.5, 1 μM
Incubation Time:	24 and 48 h
Result:	Triggered significant apoptosis after 24 h incubation, with apoptosis rates of 48.3% and 66.8% at the concentration of 0.5 μM and 1 μM, respectively. Induced apoptosis of 67.2% and 92.3% after 48 h incubation at the concentration of 0.5 μM and 1 μM, respectively.

REFERENCES

[1]. Chen Y, synthesis and pharmacological evaluation of 2,3-dihydrobenzofuran IRAK4 inhibitors for the treatment of diffuse large B-cell lymphoma. Eur J Med Chem. 2023;256:115453.

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

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