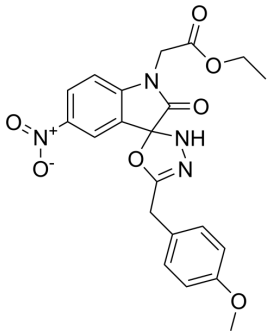
Aldose reductase-IN-7

Cat. No.:	HY-161472
Molecular Formula:	$C_{21}H_{20}N_4O_7$
Molecular Weight:	440.41
Target:	Aldose Reductase
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Aldose reductase-IN-7 (Compound 6k) targets Aldose reductase. Aldose reductase-IN-7 exhibits potent enzyme inhibitory activity (K_i = 0.186 ± 0.020 μM), showing superiority to Epalrestat (HY-66009), which is currently in clinical use. Aldose reductase-IN-7 is less cytotoxic and possesses potent anticancer activity[1].
In Vitro	Aldose reductase-IN-7 (24 h) shows low cytotoxicity in L929 cells (IC_{50} = 569.58 ± 0.80 μM). Significant anticancer activity can be observed in MCF-7 cells (IC_{50} = 110.87 ± 0.42 μM)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Cytotoxicity Assay[1]

Cell Line:	L929 cells and MCF-7 cells
Concentration:	
Incubation Time:	24h
Result:	Ideally, killed cancer cells without harming healthy cells (S_I value of 5.13). Specifically inhibited the proliferation of cancer cells compared to non-cancerous cells.

REFERENCES

[1]. Güleç Ö, et al. Novel spiroindoline derivatives targeting aldose reductase against diabetic complications: Bioactivity, cytotoxicity, and molecular modeling studies. Bioorg Chem. 2024 Apr;145:107221.

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