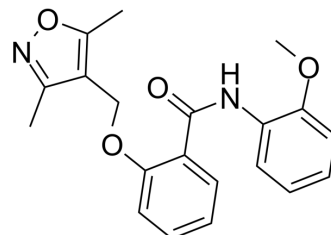


AKR1C3-IN-9

Cat. No.:	HY-152188		
CAS No.:	2924824-43-9		
Molecular Formula:	C ₂₀ H ₂₀ N ₂ O ₄		
Molecular Weight:	352.38		
Target:	Aldose Reductase		
Pathway:	Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 83.33 mg/mL (236.48 mM; ultrasonic and warming and heat to 60°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.8378 mL	14.1892 mL	28.3785 mL
		5 mM	0.5676 mL	2.8378 mL	5.6757 mL
		10 mM	0.2838 mL	1.4189 mL	2.8378 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (5.90 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (5.90 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	AKR1C3-IN-9 is a selective inhibitor of Aldo-keto Reductase 1C3 (AKR1C3) with an IC ₅₀ value of 8.92 nM. AKR1C3-IN-9 significantly reverses the Doxorubicin (HY-15142A) (DOX) resistance in a resistant breast cancer cell line ^[1] .
IC ₅₀ & Target	IC50: 8.92 nM (AKR1C3) ^[1]
In Vitro	AKR1C3-IN-9 (compound 24) (10-100 μM; 72 h and 96 h) results weak antiproliferative effect up to 100 μM in all three breast cancer cell lines (MDA-MB-231, MCF-7) ^[1] . AKR1C3-IN-9 (10 μM, 25 μM, and 50 μM; 72 h) synergistically inhibits the proliferation of MCF-7 cell with 10-50 μM DOX ^[1] . AKR1C3-IN-9 (10 μM; 8 d) synergistically inhibits the proliferation, clonogenic survival of MCF-7/DOX cell line, thus restores the sensitivity to DOX ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Liu Y, et al. Development of highly potent and specific AKR1C3 inhibitors to restore the chemosensitivity of drug-resistant breast cancer. Eur J Med Chem. 2022 Dec 13;247:115013.

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

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