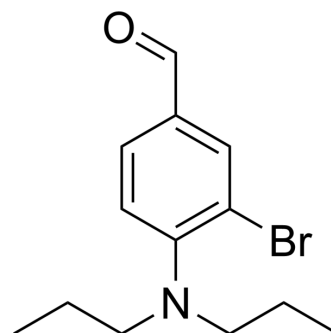


ALDH1A3-IN-1

Cat. No.:	HY-144667
CAS No.:	1695970-90-1
Molecular Formula:	C ₁₃ H ₁₈ BrNO
Molecular Weight:	284.19
Target:	Aldehyde Dehydrogenase (ALDH)
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (351.88 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.5188 mL	17.5939 mL	35.1877 mL
	5 mM	0.7038 mL	3.5188 mL	7.0375 mL
	10 mM	0.3519 mL	1.7594 mL	3.5188 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

ALDH1A3-IN-1 (Compound 14) is a potent ALDH1A3 inhibitor, with an IC₅₀ of 0.63 μM and a K_i of 0.46 μM. ALDH1A3-IN-1 can be studied in prostate cancer^[1].

IC₅₀ & Target

ALDH1	ALDH1A3 0.63 μM (IC ₅₀)	ALDH1A1 7.08 μM (IC ₅₀)	ALDH3A1 8.00 μM (IC ₅₀)
ALDH1A3 0.46 μM (K _i)	ALDH1A3 26.92 μM (K _m)		

In Vitro

ALDH1A3-IN-1 (Compound 14) (0-200 μM, 96 h) shows antiproliferative activity in prostate cancer cell lines^[1]. ALDH1A3-IN-1 (0-200 μM, 72 h) reduces cell viability of primary prostate cells in a dose-dependent manner^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Proliferation Assay^[1]

Cell Line:	PC3, LNCaP, and DU145 cells
Concentration:	12.5-200 μM

Incubation Time:	96 h
Result:	Showed antiproliferative activity with IC ₅₀ values of 47 ± 6, 25 ± 1, and 61 ± 5 μM against PC3, LNCaP, and DU145 cells.
Cell Viability Assay ^[1]	
Cell Line:	Primary cells cultured at early passage from human prostate tissue biopsies
Concentration:	50 and 200 μM
Incubation Time:	72 h
Result:	Resulted a dose-dependent reduction in percentage cell viability of primary prostate epithelial cultures.

REFERENCES

[1]. Ali I M Ibrahim, et al. Expansion of the 4-(Diethylamino)benzaldehyde Scaffold to Explore the Impact on Aldehyde Dehydrogenase Activity and Antiproliferative Activity in Prostate Cancer. J Med Chem. 2022 Mar 10;65(5):3833-3848.

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

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