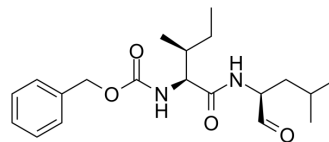


Z-Ile-Leu-aldehyde

Cat. No.:	HY-12465		
CAS No.:	161710-10-7		
Molecular Formula:	C ₂₀ H ₃₀ N ₂ O ₄		
Molecular Weight:	362.46		
Target:	Notch; γ -secretase; Apoptosis		
Pathway:	Neuronal Signaling; Stem Cell/Wnt; Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : \geq 41 mg/mL (113.12 mM)
 * " \geq " means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		2.7589 mL	13.7946 mL	27.5893 mL
	5 mM		0.5518 mL	2.7589 mL	5.5179 mL
	10 mM		0.2759 mL	1.3795 mL	2.7589 mL

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

BIOLOGICAL ACTIVITY

Description

Z-Ile-Leu-aldehyde (Z-IL-CHO) is a potent and competitive peptide aldehyde inhibitor of γ -secretase and notch^{[1][2]}.

In Vitro

Z-Ile-Leu-aldehyde (ILCHO) significantly downregulates Th17-associated cytokine levels in murine Th17 in vitro polarization assays^[1].

Z-Ile-Leu-aldehyde (GSI XII) induces apoptosis of murine MOPC315.BM myeloma cells with high Notch activity^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCRsup>[1]

Cell Line: CD4⁺ T cells from C57BL/6 mice.

Concentration: 25 μ M.

Incubation Time: 24, 48, 72 hours.

Result: Downregulated ROR α t and IL-17 mRNA expression.

	Cell Viability Assays ^{sup} [2]	
	Cell Line:	MOPC315.BM cells.
	Concentration:	0, 12, 15 μ M.
	Incubation Time:	24-48 h hours.
	Result:	Reduced viability and induced apoptosis in MOPC315.BM cells
In Vivo	<p>Z-Ile-Leu-aldehyde (GSI XII, 10 mg/kg, Intraperitoneally either for 14 days) controls myeloma bone disease mainly by targeting Notch in MM cells and possibly in osteoclasts in their microenvironment^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>	
	Animal Model:	MOPC315.BM mouse model ^[2] .
	Dosage:	10 mg/kg.
	Administration:	Intraperitoneally either for 14 days.
	Result:	Reduces myeloma-specific paraprotein levels in the MOPC315.BM model. Diminished osteolytic lesions in the MOPC315.BM mice.

CUSTOMER VALIDATION

- Front Mol Biosci. 2021 Oct 22;8:652443.

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REFERENCES

- [1]. Reem Suleiman, et al. The Role Of Notch In Th17 Differentiation. University of Massachusetts Amherst. 9-2013.
- [2]. Schwarzer R, et al. Notch pathway inhibition controls myeloma bone disease in the murine MOPC315.BM model. Blood Cancer J. 2014 Jun 13;4:e217.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA