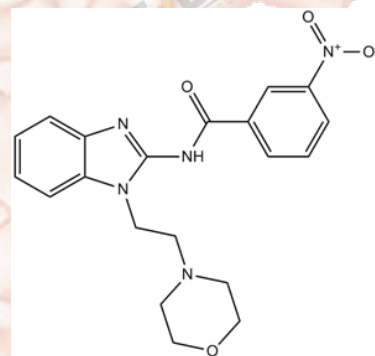


Product Data Sheet

IRAK-1-4 Inhibitor I

Cat. No.:	A3505
CAS No.:	509093-47-4
Formula:	C ₂₀ H ₂₁ N ₅ O ₄
M.Wt:	395.41
Synonyms:	IRAK-1/4 Inhibitor I
Target:	Tyrosine Kinase
Pathway:	IRAK
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; insoluble in EtOH; ≥19.75 mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1mg	5mg	10mg
	1 mM		2.5290 mL	12.6451 mL	25.2902 mL
	5 mM		0.5058 mL	2.5290 mL	5.0580 mL
	10 mM		0.2529 mL	1.2645 mL	2.5290 mL

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

Biological Activity

Shortsummary

IRAK-1/4 inhibitor

IC₅₀ & Target

0.3 μM (IRAK-1), 0.2 μM (IRAK-4)

In Vitro

Cell Viability Assay

Cell Line: HeLa cells

Preparation method: Soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting conditions: 72 hrs

	Applications:	In a 72-hr proliferation assay, IRAK-1-4 Inhibitor I did not show any cytotoxicity in HeLa cells (ED50 > 30 μ M). In addition, IRAK-1-4 Inhibitor I significantly inhibited IRAK-1 and IRAK-4 (IC50 = 0.3 μ M and 0.2 μ M, respectively).
In Vivo	Animal experiment	
	Applications:	

Product Citations

1. Zha C, Zhang W, et al. "Anti- $\beta(2)$ GPI/ $\beta(2)$ GPI induces neutrophil extracellular traps formation to promote thrombogenesis via the TLR4/MyD88/MAPKs axis activation." *Neuropharmacology*. 2018 Jun 5;138:140-150.PMID:29883691
2. Ghorpade DS, Ozcan L, et al. "Hepatocyte-secreted DPP4 in obesity promotes adipose inflammation and insulin resistance." *Nature*. 2018 Mar 29;555(7698):673-677.PMID:29562231
3. Chang MC, Chan CP, et al. "Areca nut components stimulate ADAM17, IL-1 α , PGE2 and 8-isoprostane production in oral keratinocyte: role of reactive oxygen species, EGF and JAK signaling." *Oncotarget*. 2016 Mar 29;7(13):16879-94.PMID:26919242

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References

- [1]. Jay P. Powers, Shyun Li, Juan C. Jaen, Jinqian Liu, Nigel P. C. Walker, Zhulun Wang and Holger Wesche. Discovery and initial SAR of inhibitors of interleukin-1 receptor-associated kinase-4. *Bioorganic & Medicinal Chemistry Letters*. 2006, 16: 2842–2845.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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