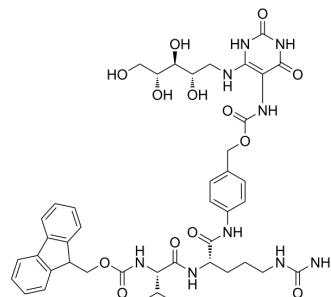


5-A-RU-PABC-Val-Cit-Fmoc

Cat. No.:	HY-131296
CAS No.:	2677841-58-4
Molecular Formula:	C ₄₃ H ₅₃ N ₉ O ₁₃
Molecular Weight:	903.93
Target:	Others
Pathway:	Others
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 150 mg/mL (165.94 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		1.1063 mL	5.5314 mL	11.0628 mL
		5 mM		0.2213 mL	1.1063 mL	2.2126 mL
10 mM		0.1106 mL	0.5531 mL	1.1063 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 3.75 mg/mL (4.15 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 3.75 mg/mL (4.15 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 3.75 mg/mL (4.15 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	5-A-RU-PABC-Val-Cit-Fmoc is the proagent of 5-A-RU ^[1] . 5-A-RU, a precursor of bacterial Riboflavin, is a mucosal-associated invariant T (MAIT) cells activator. 5-A-RU forms potent MAIT-activating antigens via non-enzymatic reactions with small molecules, such as glyoxal and methylglyoxal, which are derived from other metabolic pathways ^{[2][3][4]} .
In Vitro	When added to MAIT cell cultures, 5-A-RU-PABC-Val-Cit-Fmoc (Compound 10) induces higher levels of mucosal-associated invariant T (MAIT) cell activation than 5-A-RU alone ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Research Square Preprint. 2023 Aug 30.

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REFERENCES

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- [2]. Corbett AJ, et al. T-cell activation by transitory neo-antigens derived from distinct microbial pathways. Nature. 2014 May 15;509(7500):361-5.
- [3]. Eckle SB, et al. Recognition of Vitamin B Precursors and Byproducts by Mucosal Associated Invariant T Cells. J Biol Chem. 2015 Dec 18;290(51):30204-11.
- [4]. Soudais C, et al. In Vitro and In Vivo Analysis of the Gram-Negative Bacteria-Derived Riboflavin Precursor Derivatives Activating Mouse MAIT Cells. J Immunol. 2015 May 15;194(10):4641-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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