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Zuschläge

- Mindermengenzuschlag
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Fz7-21 TFA

Cat. No.:	HY-P1454A	
Molecular Formula:	C ₈₅ H ₁₁₅ N ₁₈ F ₃ O ₂₅ S ₂	
Molecular Weight:	1910.07	
Sequence Shortening:	Ac-LPSDDLEFWCHVMY-NH ₂	Ac-LPSDDLEFWCHVMY-NH ₂ (TFA salt)
Target:	Wnt	
Pathway:	Stem Cell/Wnt	
Storage:	Sealed storage, away from moisture	
	Powder	-80°C 2 years -20°C 1 year
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)	

SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (17.45 mM; Need ultrasonic)					
	H ₂ O : < 0.1 mg/mL (insoluble)					
		Solvent Concentration	Mass			
	Preparing Stock Solutions			1 mg	5 mg	10 mg
		1 mM		0.5235 mL	2.6177 mL	5.2354 mL
5 mM			0.1047 mL	0.5235 mL	1.0471 mL	
	10 mM		0.0524 mL	0.2618 mL	0.5235 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (1.31 mM); Suspended solution; Need ultrasonic 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (1.31 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Fz7-21 (Ac-LPSDDLEFWCHVMY-NH ₂) TFA is a potent peptide antagonist of FZD7 receptors , selectively binds to FZD7 CRD subclass and alters the conformation of the CRD and the architecture of its lipid-binding groove. The EC ₅₀ values are 58 and 34 nM for human and mouse FZD7 CRD, respectively. Fz7-21 TFA impairs the function of FZD7 in Wnt-β-catenin signalling and stem cell function in intestinal organoids ^{[1][2]} .
IC₅₀ & Target	EC ₅₀ : 58 nM (human FZD7 CRD), 34 nM (mouse FZD7 CRD) ^[1]
In Vitro	Fz7-21 (Ac-LPSDDLEFWCHVMY-NH ₂) TFA (0-100 μM; 6 h; HEK293-TB cells) impairs Wnt signaling with IC ₅₀ value of 100 nM ^[1] . Fz7-21 (Ac-LPSDDLEFWCHVMY-NH ₂) TFA (1 μM) blocks WNT3A-mediated stabilization of β-catenin in mouse L cells with IC ₅₀

value of 50 nM^[1].

Fz7-21 (Ac-LPSDDLEFWCHVMY-NH₂) TFA (200 μM; 48 h; LGR5-GFP⁺ stem cells) disrupts LGR5⁺ stem cell function^[1].

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

CUSTOMER VALIDATION

- Cell Prolif. 2023 Mar 27;e13460.
- Cell Mol Life Sci. 2022 Sep 19;79(10):523.
- Stem Cell Res Ther. 2023 Oct 26;14(1):305.

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REFERENCES

[1]. Nile AH, et, al. A selective peptide inhibitor of Frizzled 7 receptors disrupts intestinal stem cells. Nat Chem Biol. 2018 Jun;14(6):582-590.

[2]. Larasati Y, et, al. Unlocking the Wnt pathway: Therapeutic potential of selective targeting FZD7 in cancer. Drug Discov Today. 2022 Mar;27(3):777-792.

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

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