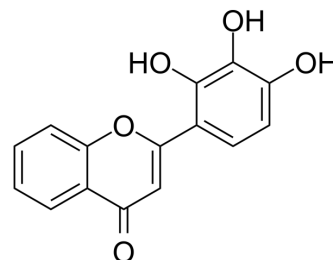


2-D08

Cat. No.:	HY-114166
CAS No.:	144707-18-6
Molecular Formula:	C ₁₅ H ₁₀ O ₅
Molecular Weight:	270.24
Target:	E1/E2/E3 Enzyme; TAM Receptor
Pathway:	Metabolic Enzyme/Protease; Protein Tyrosine Kinase/RTK
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 150 mg/mL (555.06 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		3.7004 mL	18.5021 mL	37.0041 mL
		5 mM		0.7401 mL	3.7004 mL	7.4008 mL
10 mM		0.3700 mL	1.8502 mL	3.7004 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: ≥ 2.5 mg/mL (9.25 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.25 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (9.25 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	2-D08 is a cell permeable, mechanistically unique inhibitor of protein SUMOylation. 2-D08 also inhibits Axl with an IC ₅₀ of 0.49 nM.
IC₅₀ & Target	IC ₅₀ : 0.49 nM (Axl) ^[2]
In Vitro	2-D08 inhibits sumoylation by preventing transfer of SUMO from the UBC9-SUMO thioester to the substrate ^[1] . 2-D08 decreases the ratio of p-Axl to t-Axl in a dose-dependent manner. Suppression of Axl kinase activity by 2D08 disrupts the cytoskeleton and actin filaments with re-organization at cellular junctions ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[2]

Human lung multi-potent cells at passage 5 are incubated with DMEM+0.5% BSA+penicillin/streptomycin containing either 0.1% DMSO (vehicle) or 2D08 (10 μ M) on Permax culture slides for 6 days. Cells are fixed with 4% PFA for 30 min and then blocked and permeabilized with 10% goat serum and 0.3% Triton-X 100 in PBS for 30 min^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Administration ^[3]

Mice^[3]
Eight- to 10-week-old mice (both male and female) are used for the study. A 5 cm-long glass pipette is buffered with Mineral Oil and then attached to the injection apparatus to take up 10 μ L of 2-D08 (30 μ M) or NaCl^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Life Sci. 2020 Aug 15;255:117859.
- bioRxiv. 2021 May 26.
- Research Square Preprint. 2021 Apr.

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REFERENCES

- [1]. Kim YS, et al. Synthesis of 2',3',4'-trihydroxyflavone (2-D08), an inhibitor of protein sumoylation. *Bioorg Med Chem Lett*. 2014 Feb 15;24(4):1094-7.
- [2]. Fujino N, et al. Phenotypic screening identifies Axl kinase as a negative regulator of an alveolar epithelial cell phenotype. *Lab Invest*. 2017 Sep;97(9):1047-1062.
- [3]. Ghosh H, et al. Several posttranslational modifications act in concert to regulate gephyrin scaffolding and GABAergic transmission. *Nat Commun*. 2016 Nov 7;7:13365. doi: 10.1038/ncomms13365.
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Caution: Product has not been fully validated for medical applications. For research use only.

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