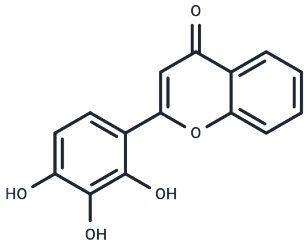
Data Sheet (Cat.No.T7379)

TargetMol

2-D08

Chemical Properties



CAS No. : 144707-18-6

Formula: C15H10O5

Molecular Weight: 270.24

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	2-D08 is a synthetic flavone that inhibits sumoylation, also inhibits Axl with an IC50 of 0.49 nM.2-D08 showed anti-aggregatory and neuroprotective effect.
Targets(IC50)	E1/E2/E3 Enzyme,TAM Receptor
In vitro	2-D08 inhibits sumoylation of topoisomerase I in the breast cancer cell lines ZR-75-1 and BT-474.[1] It specifically disrupts the transfer of SUMO from the E2 enzyme (UBC9) thioester conjugate to the substrate. 2-D08 prevents amyloid-β (Aβ) (1-42) aggregation and Aβ-induced toxicity in PC12 cells. It also has antioxidant properties[2].

Solubility Information

Solubility	DMSO: 123.75 mg/mL (457.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (18.5 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7004 mL	18.5021 mL	37.0041 mL
5 mM	0.7401 mL	3.7004 mL	7.4008 mL
10 mM	0.370 mL	1.8502 mL	3.7004 mL
50 mM	0.074 mL	0.370 mL	0.7401 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Kim Y , Nagy K , Keyser S , et al. An Electrophoretic Mobility Shift Assay Identifies a Mechanistically Unique Inhibitor of Protein Sumoylation[J]. Chemistry & Biology, 2013, 20(4):604-613.
Chen L, Li F, Ni J, et al.Ursolic Acid Alleviates Lupus Nephritis by Suppressing SUMO1-Mediated Stabilization of NLRP3.Phytomedicine.2024: 155556.
Marsh D T , Das S , Ridell J , et al. Structure-activity relationships for flavone interactions with amyloid β reveal a novel anti-aggregatory and neuroprotective effect of 2',3',4'-trihydroxyflavone (2-D08).[J]. Bioorganic & Medicinal Chemistry, 2017, 25(14).
Kim Y S , Keyser S G L , Schneekloth J S . Synthesis of 2’,3’,4’-trihydroxyflavone (2-D08), an Inhibitor of Protein Sumoylation[J]. Bioorganic & medicinal chemistry letters, 2014, 24(4).