

DDR1-IN-4

## Chemical Properties

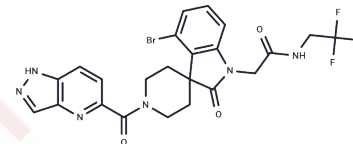
CAS No. : 2125676-13-1

Formula: C<sub>23</sub>H<sub>20</sub>BrF<sub>3</sub>N<sub>6</sub>O<sub>3</sub>

Molecular Weight: 565.34

Storage: Store at low temperature, Keep away from moisture  
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	DDR1-IN-4 (Compound 2.45) is a highly potent inhibitor that selectively targets Discoidin Domain Receptor 1 (DDR1) autophosphorylation, demonstrating exceptional efficacy with IC <sub>50</sub> values of 29 nM for DDR1 and 1.9 μM for DDR2.
Targets(IC <sub>50</sub> )	Discoidin Domain Receptor (DDR)
In vitro	DDR1-IN-4 (Compound 2.45) exhibits dose-dependent inhibition of DDR1 phosphorylation in DDR1-overexpressing HT1080 cells, achieving over 70% inhibition at a 1 μM concentration, while maintaining selectivity against DDR2 [1].
In vivo	DDR1-IN-4 (Compound 2.45, ip, 90 mg/kg) maintains renal function and mitigates tissue damage in Col4a3 <sup>-/-</sup> mice, a preclinical model for Alport syndrome, through DDR1 phosphorylation inhibition. In this model, daily 90 mg/kg intraperitoneal injections reduced fibrosis, indicated by Picro Sirius Red, smooth muscle actin staining, collagen I levels, and decreased pDDR1 levels, demonstrating efficacy.

## Solubility Information

Solubility	DMSO: 200 mg/mL (353.77 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.7688 mL	8.8442 mL	17.6885 mL
5 mM	0.3538 mL	1.7688 mL	3.5377 mL
10 mM	0.1769 mL	0.8844 mL	1.7688 mL
50 mM	0.0354 mL	0.1769 mL	0.3538 mL

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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

Hans Richter, et al. DNA-Encoded Library-Derived DDR1 Inhibitor Prevents Fibrosis and Renal Function Loss in a Genetic Mouse Model of Alport Syndrome. ACS Chem Biol. 2019 Jan 18;14(1):37-49.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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