

MD-222

## Chemical Properties

CAS No. : 2136246-72-3

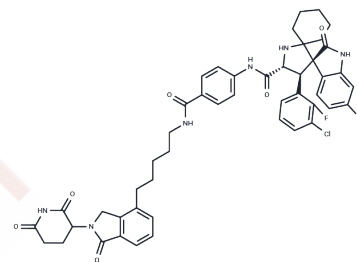
Formula: C<sub>48</sub>H<sub>47</sub>Cl<sub>2</sub>FN<sub>6</sub>O<sub>6</sub>

Molecular Weight: 893.84

Keep away from direct sunlight

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	MD-222, a pioneering, highly potent PROTAC degrader targeting MDM2, efficiently mediates the rapid degradation of MDM2 protein and activates wild-type p53 within cells, showcasing significant anticancer effects[1][2].
Targets(IC50)	E1/E2/E3 Enzyme,PROTACs,MDM-2/p53
In vitro	MD-222 (1-30 nM; 1-2 hours) treatment effectively reduces MDM2 protein levels and increases p53 levels in a time- and dose-dependent manner in RS4;11 and RS4;11/IRMI-2 cells[1]. MD-222 (30-100 nM; 6 hours) increases the expression of p53-targeted genes, including MDM2, CDKN1A, and PUMA in RS4;11 cells, indicating strong p53 activation[2]. MD-222 (4 days) inhibits cell growth in RS4;11 cells with an IC <sub>50</sub> of 5.5 nM, but shows no effect on RS4;11/IRMI-2, MDA-MB-231, and MDA-MB-468 cells[1].

## Solubility Information

Solubility	DMSO: 200 mg/mL (223.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 5 mg/mL (5.59 mM),Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.1188 mL	5.5938 mL	11.1877 mL
5 mM	0.2238 mL	1.1188 mL	2.2375 mL
10 mM	0.1119 mL	0.5594 mL	1.1188 mL
50 mM	0.0224 mL	0.1119 mL	0.2238 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

Jiuling Yang, et al. Simple Structural Modifications Converting a Bona fide MDM2 PROTAC Degradator into a Molecular Glue Molecule: A Cautionary Tale in the Design of PROTAC Degradators. *J Med Chem.* 2019 Nov 14;62(21): 9471-9487.

Li Y, et al. Discovery of MD-224 as a First-in-Class, Highly Potent, and Efficacious Proteolysis Targeting Chimera Murine Double Minute 2 Degradator Capable of Achieving Complete and Durable Tumor Regression. *J Med Chem.* 2019 Jan 24;62(2):448-466.

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