



SZABO SCANDIC

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Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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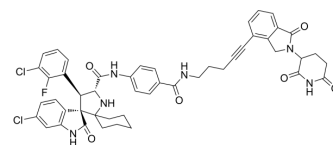
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MD-224

Cat. No.:	HY-114312
CAS No.:	2136247-12-4
Molecular Formula:	C ₄₈ H ₄₃ Cl ₂ FN ₆ O ₆
Molecular Weight:	889.8
Target:	PROTACs; MDM-2/p53; E1/E2/E3 Enzyme
Pathway:	PROTAC; Apoptosis; Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (112.38 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		1.1238 mL	5.6192 mL	11.2385 mL
	5 mM		0.2248 mL	1.1238 mL	2.2477 mL
	10 mM		0.1124 mL	0.5619 mL	1.1238 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 7.5 mg/mL (8.43 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: 7.5 mg/mL (8.43 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
Solubility: 2.5 mg/mL (2.81 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
Solubility: 2.5 mg/mL (2.81 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

MD-224 is a first-in-class and highly potent small-molecule human murine double minute 2 (MDM2) degrader based on the proteolysistargeting chimera (PROTAC) concept. MD-224 consists of ligands for Cereblon and MDM2. MD-224 induces rapid degradation of MDM2 at concentrations <1 nM in human leukemia cells, and achieves an IC₅₀ value of 1.5 nM in inhibition of growth of RS4;11 cells. MD-224 has the potential to be a new class of anticancer agent^[1]. MD-224 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAC) with molecules

	containing Azide groups.																								
IC ₅₀ & Target	MDM2 1 nM (IC ₅₀)																								
In Vitro	MD-224 (1-30 nM; 2 hours) effectively induces depletion of MDM2 protein and concurrently accumulation of p53 protein in a dose-dependent manner in RS4;11 cells^[1]. ?MD-224 (30 nM; 6 hours) is more potent than MI-1061 in induction of transcriptional upregulation of these p53 target genes but have no effect on TP53 itself in RS4;11 cells^[1]. ?MD-224 (0.001-1 μM; 24 hours) induces robust apoptosis at ≤10 nM in a dose-dependent manner upon a 24 hours treatment ^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis^[1] <table> <tr> <td>Cell Line:</td><td>RS4;11 cells</td></tr> <tr> <td>Concentration:</td><td>1 nM; 3 nM; 10 nM; 30 nM</td></tr> <tr> <td>Incubation Time:</td><td>2 hours</td></tr> <tr> <td>Result:</td><td>Decreased MDM2 protein and accumulated of p53 protein.</td></tr> </table> RT-PCR^[1] <table> <tr> <td>Cell Line:</td><td>RS4;11 cells</td></tr> <tr> <td>Concentration:</td><td>30 nM</td></tr> <tr> <td>Incubation Time:</td><td>6 hours</td></tr> <tr> <td>Result:</td><td>Upregulated p53 target gene expression.</td></tr> </table> Apoptosis Analysis^[1] <table> <tr> <td>Cell Line:</td><td>RS4;11 cells</td></tr> <tr> <td>Concentration:</td><td>0.001 μM, 0.003 μM, 0.01 μM, 0.03 μM, 0.1 μM, 0.3 μM, 1 μM</td></tr> <tr> <td>Incubation Time:</td><td>24 hours</td></tr> <tr> <td>Result:</td><td>Induces robust apoptosis in RS4;11 cells.</td></tr> </table>	Cell Line:	RS4;11 cells	Concentration:	1 nM; 3 nM; 10 nM; 30 nM	Incubation Time:	2 hours	Result:	Decreased MDM2 protein and accumulated of p53 protein.	Cell Line:	RS4;11 cells	Concentration:	30 nM	Incubation Time:	6 hours	Result:	Upregulated p53 target gene expression.	Cell Line:	RS4;11 cells	Concentration:	0.001 μM, 0.003 μM, 0.01 μM, 0.03 μM, 0.1 μM, 0.3 μM, 1 μM	Incubation Time:	24 hours	Result:	Induces robust apoptosis in RS4;11 cells.
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Result:	Induces robust apoptosis in RS4;11 cells.																								

CUSTOMER VALIDATION

- Cell Rep. 2022 May 31;39(9):110879.
- bioRxiv. 2023 May 26.
- Research Square Print. November 18th, 2022
- St. Johns University. 2021 Jul.

See more customer validations on www.MedChemExpress.com

REFERENCES

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

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