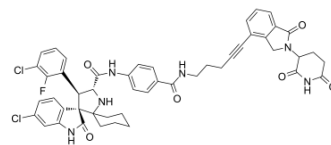


MD-224

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:	PROTAC; MDM-2/p53
Pathway:	PROTAC; Apoptosis
Storage:	Please store the product under the recommended conditions in the COA.



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 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].

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; 24hours) induces robust apoptosis at ≤10 nM in a dose-dependent manner upon a 24 hours treatment^[1].

Western Blot Analysis^[1]

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.

RT-PCR^[1]

Cell Line:	RS4;11 cells
Concentration:	30 nM
Incubation Time:	6 hours
Result:	Upregulated p53 target gene expression.

Apoptosis Analysis^[1]

Cell Line:	RS4;11 cells
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Concentration:	0.001 μ M, 0.003 μ M, 0.01 μ M, 0.03 μ M, 0.1 μ M, 0.3 μ M, 1 μ M
Incubation Time:	24 hours
Result:	Induces robust apoptosis in RS4;11 cells.

REFERENCES

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

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

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