Product Datasheet

MI-389

Catalog No. **BP-02445** · CAS **2222635-92-7** · Form **free base** · Physical state **solid** · Version **1.0** · Revision **2026-09-11**

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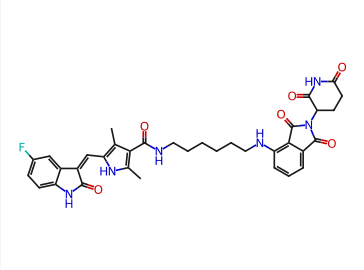
Target	Research area
PROTACs; Eukaryotic Release Factor (eRF); Epigenetic Reader Domain	**Cancer**

Molecular formula	$C_{35}H_{35}FN_6O_6$
Molecular weight	**654.6874**

STRUCTURE



DESCRIPTION

MI-389 is a potent menin-MLL interaction inhibitor (IC50=25 nM) and a CRBN-recruiting, GSPT1-targeted PROTAC degrader. MI-389 upregulates myeloid differentiation-related genes that are lowly expressed in primitive hematopoietic progenitor cells, thereby inducing myeloid differentiation phenotypic changes in MLL-rearranged leukemia cells. MI-389 competitively blocks the MG-H1-RAGE interaction to interfere with the AGEs-RAGE pathway, thus alleviating AGEs-induced HUVEC injury . MI-389 can be used in studies related to MLL-rearranged acute leukemia .

BIOLOGICAL ACTIVITY

In Vitro
MI-389 potently inhibits the menin-MLL interaction in cell-free assays, with an IC50 of 25 nM and a Kd of 21 nM for binding to menin.

MI-389 (0.74-1.69 μM; 7 days) selectively inhibits the growth of MLL-rearranged leukemia cells (MV4;11, MOLM-13, MLL-AF9 BMCs) with GI50 values ranging from 0.74-1.69 μM, while showing no activity against non-MLL leukemia cells (Jurkat, HM-2 BMCs) after 7 days of treatment.

MI-389 (4 μM; 6 days) reverses the MLL fusion-driven gene expression signature in MV4;11 human MLL leukemia cells, downregulating oncogenic MLL target genes and upregulating differentiation-associated genes after 6 days of treatment with 4 μM MI-389.

MI-389 (2 μM; 6 days) downregulates oncogenic MLL target genes and upregulates the myeloid differentiation marker MNDA in MOLM-13 human MLL leukemia cells.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1].Borkin D, et al. Pharmacologic inhibition of the Menin-MLL interaction blocks progression of MLL leukemia in vivo[J]. Cancer cell, 2015, 27(4): 589-602.

[2].Feng L, et al. Competitive binding between 4,4'-diphenylmethane-bis(methyl) carbamate and RAGE ligand MG-H1 on human umbilical vein endothelial cell by cell membrane chromatography. Journal of chromatography. B, Analytical technologies in the biomedical and life sciences. 2012 Jan 15;881-882:55-62.

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