

PRODUCT INFORMATION

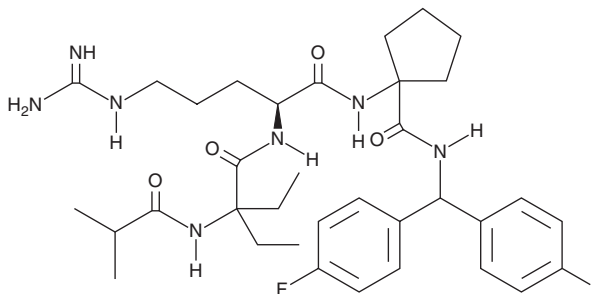


MM-102

Item No. 17699

CAS Registry No.: 1417329-24-8
Formal Name: 1-[[[(2S)-5-[(aminoiminomethyl)amino]-2-[[2-ethyl-2-[(2-methyl-1-oxopropyl)amino]-1-oxobutyl]amino]-1-oxopentyl]amino]-N-[bis(4-fluorophenyl)methyl]-cyclopentanecarboxamide

MF: C₃₅H₄₉F₂N₇O₄
FW: 669.8
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MM-102 is supplied as a crystalline solid. A stock solution may be made by dissolving the MM-102 in the solvent of choice, which should be purged with an inert gas. MM-102 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MM-102 in these solvents is approximately 20, 25, and 30 mg/ml, respectively.

MM-102 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MM-102 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MM-102 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

WD-repeat protein 5 (WDR5) is a scaffold protein commonly involved in the formation of nucleosome-modifying protein complexes with histones.¹ It serves as a component of a mixed-lineage leukemia (MLL) methyltransferase complex that targets histone 3 at lysine 4 to upregulate transcription.² MM-102 is a potent WDR5/MLL interaction inhibitor (IC₅₀ = 2.4 nM).³ It has been shown to block MLL1 methyltransferase activity, reducing the expression of HoxA9 and Meis-1 genes, which are both critical MLL1 target genes in MLL1 fusion protein-mediated leukemogenesis.³ MM-102 can also inhibit cell growth and induce apoptosis in leukemia cells harboring MLL1 fusion proteins.³

References

1. Migliori, V., Mapelli, M., and Guccione, E. On WD40 proteins: Propelling our knowledge of transcriptional control? *Epigenetics* **7(8)**, 815-822 (2012).
2. Guccione, E., Bassi, C., Casadio, F., *et al.* Methylation of histone H3R2 by PRMT6 and H3K4 by an MLL complex are mutually exclusive. *Nature* **449(7164)**, 933-937 (2007).
3. Karatas, H., Townsend, E.C., Cao, F., *et al.* High-affinity, small-molecule peptidomimetic inhibitors of MLL1/WDR5 protein-protein interaction. *J. Am. Chem. Soc.* **135(2)**, 669-682 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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