Product Datasheet

RMC-9945

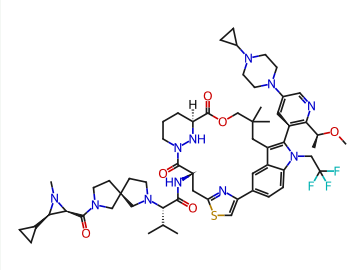
Catalog No. **BP-08839** · CAS **2922732-38-3** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-11-16**

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Target	Research area
Ras; β-catenin	**Cancer**

Molecular formula	**$C_{60}H_{80}F_3N_{11}O_6S$**
Molecular weight	**1140.4320**

STRUCTURE



DESCRIPTION

RMC-9945 (RM-044) is a selective, covalent, and orally active RAS (ON) G12D inhibitor. RMC-9945 enhances the transcriptional activity of β-Catenin/TCF. RMC-9945 induces cell state transition, forcing metastatic colorectal cancer cells to switch from the Emp1 + state to the Lgr5 + stem cell-like state. RMC-9945 achieves durable disease control in preclinical models of colorectal cancer with early liver metastasis, but shows reduced activity in late-stage metastasis models. RMC-9945 can be used in research related to metastatic colorectal cancer and pancreatic ductal adenocarcinoma .

BIOLOGICAL ACTIVITY

RMC-9945 (100 nM) transiently inhibits the growth of AKTP MTO in vitro, induces the transition from the Emp1+ HRC state to the Lgr5+ CSC state, and enhances the transcriptional activity of β-catenin/TCF by upregulating TCF/LEF transcription factors[1].

RMC-9945 (100 nM; 4-10 days) induces the transition from the EMP1+ HRC state to the LGR5+ CSC state in KRASG12D-mutated colorectal cancer organoids, and its growth inhibitory activity varies across different models[1].

RMC-9945 (100 nM) alters chromatin accessibility in AKTP MTO, reduces the regulatory effect of AP1 on HRC-related genes, and enhances the regulatory effect of LEF/TCF on Lgr5+ CSC-related genes, without inducing large-scale changes in chromatin topology

SOLUBILITY

Soluble in DMSO : 100 mg/mL

In vitro	DMSO : 100 mg/mL

REFERENCES

[1]. Centonze A, et al. A Plastic EMP1+ to LGR5+ Cell State Conversion as a Bypass to KRASG12D Pharmacologic Inhibition in Metastatic Colorectal Cancer. Cancer discovery. 2026 Feb 06;16(2):320-344. (https://pubmed.ncbi.nlm.nih.gov/41128661)

[2]. Bu J, et al. Cancer Stem Cells in Human Gastrointestinal and Hepatic Cancers. MedComm (2020). 2025 Dec 3;6(12):e70513. doi: 10.1002/mco2.70513. (https://pubmed.ncbi.nlm.nih.gov/41346572/)

[3]. Vincent A, et al. Pancreatic cancer. Lancet (London, England). 2011 Aug 13;378(9791):607-20.

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