

PRODUCT INFORMATION



RMC-7977

Item No. 42185

CAS Registry No.: 2765082-12-8
Formal Name: (1 α ,5 α ,6 α)-N-[(2R,14S,18S)-2-[5-(4-cyclopropyl-1-piperazinyl)-2-[(1S)-1-methoxyethyl]-3-pyridinyl]-1-ethyl-18,19,20,21-tetrahydro-25,25-dimethyl-15,22-dioxo-17H-5,3-[[4,2]-endo-thiazolopropano[1,3]-endo-pyridazinomethanoxypropano]-1H-indol-14-yl]-3-oxabicyclo[3.1.0]hexane-6-carboxamide

MF: C₄₇H₆₀N₈O₆S

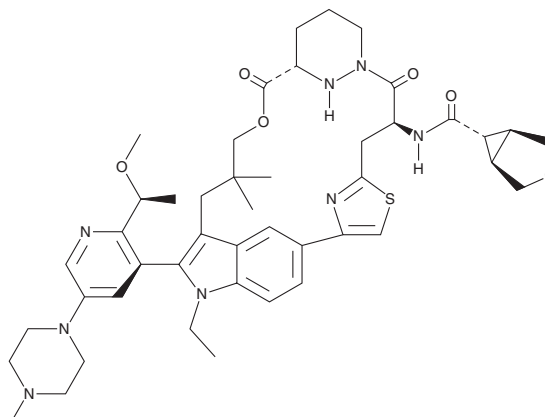
FW: 865.1

Purity: \geq 95%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

RMC-7977 is supplied as a solid. A stock solution may be made by dissolving the RMC-7977 in the solvent of choice, which should be purged with an inert gas. RMC-7977 is soluble (\geq 10 mg/ml) in ethanol and DMSO.

Description

RMC-7977 is an inhibitor of wild-type and mutant Ras protein-protein interactions.¹ It inhibits the interaction between wild-type K-Ras and seven activating mutation-containing K-Ras variants and C-RAF (EC_{50} s = 5.06-34.5 nM) and the same K-Ras variants and cyclophilin A (EC_{50} s = 1.27-9.12 nM) in bioluminescence resonance energy transfer (BRET) assays using U2OS cells expressing the human proteins. RMC-7977 also inhibits the protein-protein interactions between wild-type N-Ras, N-Ras^{Q61K}, N-Ras^{Q61L}, and N-Ras^{Q61R} and B-RAF (EC_{50} s = 57.7, 53.9, 145, and 181 nM, respectively, in time-resolved FRET (TR-FRET) assays) and wild-type H-Ras and H-Ras^{G13R} and B-RAF (EC_{50} s = 59.9 and 23.7 nM, respectively, in TR-FRET assays). It has antiproliferative activity against a panel of 183 K-Ras-dependent cancer cell lines (median EC_{50} = 2.4 nM). RMC-7977 (10 nM) also reduces the proliferation of adagrasib-resistant NCI H358 non-small cell lung cancer (NSCLC) cells. It reduces tumor volumes in SW620 colon, HPAC pancreatic, and NCI H441 lung cancer mouse xenograft models when administered at a dose of 10 mg/kg per day.

Reference

1. Holderfield, M., Lee, B.J., Jiang, J., *et al.* Concurrent inhibition of oncogenic and wild-type RAS-GTP for cancer therapy. *Nature* **629**(8013), 919-926 (2024).

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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