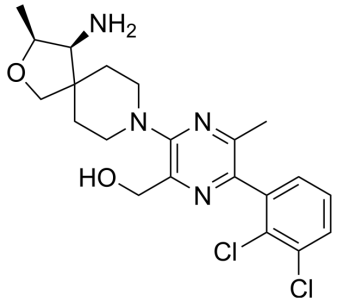
RMC-4550

Cat. No.:	HY-116009
CAS No.:	2172651-73-7
Molecular Formula:	$C_{21}H_{26}Cl_2N_4O_2$
Molecular Weight:	437.36
Target:	Phosphatase; SHP2
Pathway:	Metabolic Enzyme/Protease; Protein Tyrosine Kinase/RTK
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (228.64 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2864 mL	11.4322 mL	22.8645 mL
	5 mM	0.4573 mL	2.2864 mL	4.5729 mL
	10 mM	0.2286 mL	1.1432 mL	2.2864 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.72 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.72 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.72 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RMC-4550 is a potent, selective and allosteric inhibitor of SHP2, with an IC_{50} of 0.583 nM.

IC_{50} & Target

IC50:0.583 nM (SHP2)[1].

In Vitro

RMC-4550 is an allosteric inhibitor of SHP2 and stabilizes the auto-inhibited conformation of wild-type SHP2 enzyme, with a mode of inhibition similar to SHP099. Consistent with an allosteric mode of inhibition, RMC-4550 inhibits the activity of full-length wild-type SHP2 enzyme activated by a di-phosphotyrosine peptide, but lacks activity against the free catalytic

domain of SHP2[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cancer Discov. 2021 Jul;11(7):1716-1735.
- Cancer Res. February 09 2022.
- Cancer Res. 2020 Aug 15;80(16):3413-3423.

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REFERENCES

[1]. Nichols RJ, et al. RAS nucleotide cycling underlies the SHP2 phosphatase dependence of mutant BRAF-, NF1- and RAS-driven cancers. Nat Cell Biol. 2018 Sep;20(9):1064-1073.

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