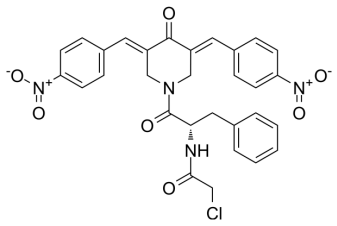
RA375

Cat. No.:	HY-136563
CAS No.:	2649154-57-2
Molecular Formula:	$C_{30}H_{25}ClN_4O_7$
Molecular Weight:	589
Target:	Proteasome; Apoptosis; Reactive Oxygen Species
Pathway:	Metabolic Enzyme/Protease; Apoptosis; Immunology/Inflammation; NF-κB
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (169.78 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6978 mL	8.4890 mL	16.9779 mL
	5 mM	0.3396 mL	1.6978 mL	3.3956 mL
	10 mM	0.1698 mL	0.8489 mL	1.6978 mL

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

BIOLOGICAL ACTIVITY

Description

RA375 is a RPN13 (26S proteasome regulatory subunit) inhibitor. RA375 activates UPR signaling, ROS production and apoptosis. RA375 exhibits ten-fold greater activity against cancer lines than RA190, reflecting its nitro ring substituents and the addition of a chloroacetamide warhead[1].

In Vivo

RA375 (10 mg/kg, ip) inhibits proteasome function and reduces ovarian tumor burden in mice[1].

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

Animal Model:	RA375 (10 mg/kg, ip) inhibits proteasome function and reduces ovarian tumor burden in mice[1].
Dosage:	10 mg/kg.
Administration:	IP for a 5 days on, 2 days off cycle for two weeks.
Result:	Reduced ovarian tumor burden in mice.

Animal Model:	Female Balb/c mice[1].
Dosage:	5, 10, 20, 40, 60, 100 mg/kg (Pharmacological Analysis).
Administration:	IP single dose.
Result:	The dose of 40 mg/kg on alternate days for two weeks produced no observable toxicities or weight loss.

REFERENCES

[1]. Ravi K Anchoori, et al. Structure-function Analyses of Candidate Small Molecule RPN13 Inhibitors With Antitumor Properties. PLoS One. 2020 Jan 15;15(1):e0227727.

Caution: Product has not been fully validated for medical applications. For research use only.

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