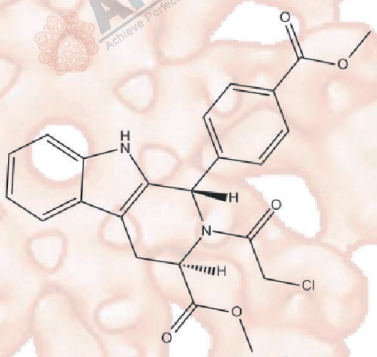
Product Data Sheet

RSL3



Cat. No.:	B6095
CAS No.:	1219810-16-8
Formula:	C23H21ClN2O5
M.Wt:	440.88
Synonyms:	
Target:	Metabolism
Pathway:	Lipid Metabolism
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ≥125.4 mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	2.2682 mL	11.3410 mL	22.6819 mL
5 mM	0.4536 mL	2.2682 mL	4.5364 mL
10 mM	0.2268 mL	1.1341 mL	2.2682 mL

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

Biological Activity

Shortsummary	glutathione peroxidase 4 inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	BJ-TERT/LT/ST/RASV12 and DRD cells
Preparation method:	Soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	5 μg/ml, 2 days

	Applications:	RSL3 displayed synthetic lethality with oncogenic RAS in both BJ-TERT/LT/ST/RASV12 and DRD cells. RSL3 inhibited the growth of BJ-TERT/LT/ST/RASV12 and DRD cells as low as 10 ng/ml and started to kill sensitive cells as early as 8 hr after treatment. Longer treatment with RSL3 had little effect on the viability of cells lacking oncogenic RAS. RSL3 induced rapid and nonapoptotic cell death in oncogenic ras containing tumorigenic cells.
In Vivo	**Animal experiment**	
	Animal models:	Athymic nude mice xenografted with BJeLR cells
	Dosage form:	Subcutaneous injection (s.c.), 100 mg/kg, twice each week for 2 weeks.
	Applications:	RSL3 prevented tumor growth in a xenograft model. (1S, 3R)-RSL3 significantly prevented tumor growth. (1S, 3R)-RSL3 significantly reduced tumor volume via the induction of ferroptosis. Intraperitoneal injection of (1S, 3R)-RSL3 showed no toxicity up to 400 mg/kg dose, which suggested that (1S, 3R)-RSL3 was well tolerated.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Chu B, Kon N, et al. "ALOX12 is required for p53-mediated tumour suppression through a distinct ferroptosis pathway." Nat Cell Biol. 2019 May;21(5):579-591.PMID:30962574

See more customer validations on www.apexbt.com.

References

[1]. Yang W S, Stockwell B R. Synthetic lethal screening identifies compounds activating iron-dependent, nonapoptotic cell death in oncogenic-RAS-harboring cancer cells[J]. Chemistry & biology, 2008, 15(3): 234-245.

[2]. Yang W S, SriRamaratnam R, Welsch M E, et al. Regulation of ferroptotic cancer cell death by GPX4[J]. Cell, 2014, 156(1): 317-331.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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