Product Data Sheet

4E1RCat

Cat. No.:	B3697
CAS No.:	328998-25-0
Formula:	C28H18N2O6
M.Wt:	478.45
Synonyms:	
Target:	Others
Pathway:	Others
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

≥23.85 mg/mL in DMSO; insoluble in H2O; insoluble in H2O; insoluble in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.0901 mL	10.4504 mL	20.9008 mL
5 mM	0.4180 mL	2.0901 mL	4.1802 mL
10 mM	0.2090 mL	1.0450 mL	2.0901 mL

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

Biological Activity

Shortsummary	Dual inhibitor of eIF4E:eIF4G and eIF4E:4E-BP1 interaction
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	HL-1 cardiomyocytes
Preparation method:	The solubility of this compound in DMSO is >23.85mg/mL. 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 μM;12 hr

	Applications:	In HL-1 cardiomyocytes, suppression of eIF4E-induced translation by 4E1RCat contributed to suppression of MCL-1 expression.
In Vivo	**Animal experiment**	
	Animal models:	mice bearing Pten+/-Eμ-Myc or Tsc2+/-Eμ-Myc lymphomas
	Dosage form:	4E1RCat (15 mg/kg daily for 5 d); doxorubicin (once at 10 mg/kg on day two) intraperitoneal (i.p.) injection in 5.2% PEG 400/ 5.2% Tween 80
	Applications:	In mice bearing Pten+/-Eμ-Myc or Tsc2+/-Eμ-Myc lymphomas, 4E1RCat and doxorubicin (Dox) synergized and extended tumor-free remissions for up to 14d, unlikely due to 4E1RCat nonspecifically increasing Dxr efficacy. 4E1RCat + Dxr increased the number of apoptotic cells. 4E1RCat decreased levels of Mcl-1 in tumors.
	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

See more customer validations on www.apexbt.com.

References

[1]. Arnold N1, Koppula PR1, Gul R2, et al. Regulation of cardiac expression of the diabetic marker microRNA miR-29. PLoS One. 2014 Jul 25;9(7):e103284.

[2]. Cencic R, Hall DR, Robert F, et al. Reversing chemoresistance by small molecule inhibition of the translation initiation complex eIF4F. Proc Natl Acad Sci, 2011, 108(3): 1046-1051.

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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