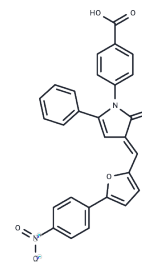


4E1rcat

Chemical Properties

CAS No. : 328998-25-0
 Formula: C₂₈H₁₈N₂O₆
 Molecular Weight: 478.45
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	4E1RCat is a dual inhibitor of eIF4E:eIF4g and eIF4E:4E-BP1 interaction. And it inhibits the binding of eIF4g to eIF4E with IC ₅₀ of 3.2 μM.
Targets(IC ₅₀)	Autophagy,PERK
Kinase Assay	Kinase Assay: GSK3 scintillation proximity assay is done. The competition experiments are carried out in duplicate with 10 concentrations of the inhibitor in clear-bottomed microtiter plates. The biotinylated peptide substrate biotin-AAEELDSRAGS(PO ₃ H ₂)PQL, is added at a final concentration of 2 μM in an assay buffer containing 6 milliunits of recombinant human GSK3 (equal mix of both α and β), 12 mM MOPS, pH 7.0, 0.3 mM EDTA, 0.01% β-mercaptoethanol, 0.004% Brij 35, 0.5% glycerol, and 0.5 μg of bovine serum albumin/25 μl and preincubated for 10-15 min. The reaction is initiated by the addition of 0.04 μCi of [γ- ³³ P]ATP and unlabeled ATP in 50 mM Mg(Ac) ₂ to a final concentration of 1 μM ATP and assay volume of 25 μl. Blank controls without peptide substrate are used. After incubation for 20 min at room temperature, each reaction is terminated by the addition of 25 μl of stop solution containing 5 mM EDTA, 50 μM ATP, 0.1% Triton X-100, and 0.25 mg of streptavidin-coated SPA beads corresponding to 35 pmol of binding capacity. After 6 h the radioactivity is determined in a liquid scintillation counter.

Solubility Information

Solubility	DMSO: 23.9 mg/mL (49.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0901 mL	10.4504 mL	20.9008 mL
5 mM	0.418 mL	2.0901 mL	4.1802 mL
10 mM	0.209 mL	1.045 mL	2.0901 mL
50 mM	0.0418 mL	0.209 mL	0.418 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Shuda M, et al. Proc Natl Acad Sci U S A. 2015 May 12;112(19):5875-82.

Chen C, Zhang X, Wang Y, et al. Translational and Post-translational Control of Human Naïve versus Primed Pluripotency. iScience. 2021: 103645.

Xiang H, Zhou M, Li Y, et al. Drug discovery by targeting the protein-protein interactions involved in autophagy. Acta Pharmaceutica Sinica B. 2023

Xiang H, Liu R, Zhang X, et al. Discovery of Small-Molecule Autophagy Inhibitors by Disrupting the Protein-Protein Interactions Involving Autophagy-Related 5. Journal of Medicinal Chemistry. 2023

Zou C, Li W, Zhang Y, et al. Identification of an anaplastic subtype of prostate cancer amenable to therapies targeting SP1 or translation elongation. Science Advances. 2024, 10(14): eadm7098.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481