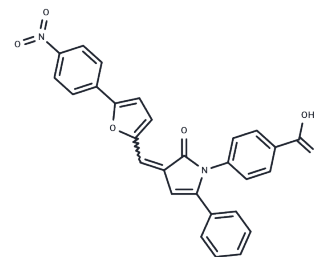


4E1rcat

Chemical Properties

CAS No. : 328998-25-0
Formula: C₂₈H₁₈N₂O₆
Molecular Weight: 478.45
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	4E1RCat is a dual inhibitor of eIF4E: eIF4 g and eIF4E:4E-BP1 interaction. And it inhibits the binding of eIF4 g to eIF4E with IC ₅₀ of 3.2 μM.
Targets(IC ₅₀)	PERK, Autophagy
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 (50 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

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.

Reference

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

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481