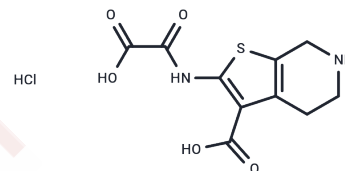


TCS 401

Chemical Properties

CAS No. : 243966-09-8
 Formula: C₁₀H₁₁ClN₂O₅
 Molecular Weight: 306.72
 Storage: Store at low temperature
 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	TCS 401 is a selective inhibitor of protein-tyrosine phosphatase 1B (PTP1B) with a Ki value of 0.29 μ M.
Targets(IC50)	Phosphatase
In vitro	TCS 401 promoted the proliferation and expression of cyclin A and cyclin D1 in RPE cells. TCS 401 induced RPE cells to differentiate toward better contractility and motility. A migration assay proved that inhibiting PTP1B improved the migratory activity of RPE cells. TCS 401 activated extracellular signal-regulated kinase (Erk) and protein kinase B (Akt) phosphorylation. Pretreatment with PD98059 and LY294002 abolished TCS 401-induced activation of Erk, Akt, cell proliferation, and cell migration[1].
Cell Research	From the cultured RPE cells treated with TCS 401, cell proliferation was assessed using a 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide assay, and the protein expression levels of cyclin A and cyclin D1 were determined. The effect of TCS 401 on cell differentiation was confirmed by immunostaining for α -smooth muscle actin and by western blot. Cell migration activity and PTP1B signaling mechanism were determined. Migration Assay was used to evaluate cell migration activity. PTP1B signaling mechanism was determined by use of PD98059 and LY294002[1].

Solubility Information

Solubility	DMSO: 11 mg/mL (35.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2603 mL	16.3015 mL	32.603 mL
5 mM	0.6521 mL	3.2603 mL	6.5206 mL
10 mM	0.326 mL	1.6302 mL	3.2603 mL
50 mM	0.0652 mL	0.326 mL	0.6521 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

Du Z D , Hu L T , Zhao G Q , et al. Protein tyrosine phosphatase 1B regulates the activity of retinal pigment epithelial cells[J]. Molecular vision, 2015, 21:523-531.

Necrotic renal epithelial cell inhibits renal interstitial fibroblast activation: role of protein tyrosine phosphatase 1B.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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

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