



上海源叶生物科技有限公司  
 Shanghai yuanye Bio-Technology Co., Ltd  
 电话: 021-61312973 传真: 021-55068248  
 网址: www.shyuanye.com  
 邮箱: shyysw@sina.com

产品名称: TCS 401  
 产品别名: TCS 401

生物活性:																		
<b>Description</b>	TCS 401 is a selective inhibitor of protein tyrosine phosphatase 1B (PTP1B).																	
<b>In Vitro</b>	TCS-401 (0.5, 1, 2 $\mu$ M) significantly increases the proliferation of RPE cells. TCS-401 significantly increases the expression of cyclin A and cyclin D1 at the concentrations of 1 and 2 $\mu$ M in a concentration-dependent manner. TCS-401 at concentrations of 0.5, 1, and 2 $\mu$ M significantly increases phosphorylation of Erk and Akt compared to the control group. The activation of Erk and Akt by TCS-401 is blocked by pretreatment with PD98059 and LY294002, respectively. CS-401 treatment activates the MEK/Erk and PI3K/Akt signaling pathways and induces proliferation, differentiation, and migration in RPE cells[1]. CS-401 dose dependently inhibits the RPTC-Sup-induced reduction of fibronectin and $\alpha$ -SMA. At 1 $\mu$ M, TCS-401 reverses the levels of fibronectin and $\alpha$ -SMA about onefold and at a dose of 2 $\mu$ M, TCS-401 brings back fibronectin and $\alpha$ -SMA expression to near normal levels[2].																	
<b>Solvent&amp;Solubility</b>	<b>In Vitro:</b> DMSO : 11 mg/mL (35.86 mM; Need ultrasonic and warming)																	
	<table border="1"> <thead> <tr> <th rowspan="2">Preparing Stock Solutions</th> <th>Solvent \ Mass Concentration</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>3.2603 mL</td> <td>16.3015 mL</td> <td>32.6030 mL</td> </tr> <tr> <td>5 mM</td> <td>0.6521 mL</td> <td>3.2603 mL</td> <td>6.5206 mL</td> </tr> <tr> <td>10 mM</td> <td>0.3260 mL</td> <td>1.6302 mL</td> <td>3.2603 mL</td> </tr> </tbody> </table>	Preparing Stock Solutions	Solvent \ Mass Concentration	1 mg	5 mg	10 mg	1 mM	3.2603 mL	16.3015 mL	32.6030 mL	5 mM	0.6521 mL	3.2603 mL	6.5206 mL	10 mM	0.3260 mL	1.6302 mL	3.2603 mL
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*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。 储备液的保存方式和期限 -80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。																		
<b>References</b>	[1]. Du ZD, et al. Protein tyrosine phosphatase 1B regulates the activity of retinal pigment epithelial cells. Mol Vis. 2015 May 1;21:523-31. [2]. Ponnusamy M, et al. Necrotic renal epithelial cell inhibits renal interstitial fibroblast activation: role of protein tyrosine phosphatase 1B. Am J Physiol Renal Physiol. 2013 Mar 15;304(6):F698-709.																	
实验参考:																		
<b>Cell Assay</b>	Cell proliferation are examined using MTT assay. The $5 \times 10^3$ cells grown in a 96-well plate for 24 h are partially starved in DMEM/F12 supplemented with 1% FBS for 12 h, and then stimulated with various concentrations of TCS-401 for an additional 24 h. MTT are added to the culture medium, and the cells are incubated for an additional 4 h. The formazan crystals formed are then dissolved by adding dimethyl sulfoxide (100 $\mu$ L per well). Absorbance at 490 nm are measured using a microplate reader. [1]																	
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