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产品名称: TCS 401
产品别名: TCS 401

生物活性:					
Description	TCS 401 is a selective inhibitor of protein tyrosine phosphatase 1B (PTP1B).				
In Vitro	TCS-401 (0.5, 1, 2 μM) 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 μM in a concentration-dependent manner. TCS-401 at concentrations of 0.5, 1, and 2 μM 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 α-SMA. At 1 μM, TCS-401 reverses the levels of fibronectin and α-SMA about onefold and at a dose of 2 μM, TCS-401 brings back fibronectin and α-SMA expression to near normal levels[2].				
Solvent&Solubility	In Vitro: DMSO : 11 mg/mL (35.86 mM; Need ultrasonic and warming)				
	Preparing Stock Solutions	Solvent Concentration	Mass		
			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	
*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℃, 6 months; -20℃, 1 month。 -80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。					
References	[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:					
Cell Assay	Cell proliferation are examined using MTT assay. The 5×10 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 μL per well). Absorbance at 490 nm are measured using a microplate reader. [1]				
References	[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.				