Product Data Sheet

Product Name: Sincalide (CCK-8)
Cat. No.: GC32749

Chemical Properties

Cas. No.	25126-32-3		
SMILES	Asp-{SO3H-Tyr}-Met-Gly-Trp-Met-Asp-Phe-NH2		
Formula	$C_{49}H_{62}N_{10}O_{16}S_3$	M.Wt	1143.27
Solubility	DMSO : 16.67 mg/mL (14.58 mM);Water : < 0.1 mg/mL (insoluble)	Storage	Store at -20°C,protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Sincalide (CCK-8)		

Protocol

Cell experiment [1]:

Cell lines	H9c2 cells
Preparation Method	H9c2 cells were incubated with sincalide (0.001, 0.01, 0.1, 1, 10, or 100μM) or Ang II (0.01, 0.1, 1, or 10μM) for 24 hours. Then treated the cells with sincalide at various concentrations (0.001, 0.01, 0.1, 1, 10, 100μM) before adding Ang II.
Reaction Conditions	0.001, 0.01, 0.1, 1, 10, or 100μM

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Applications	Treatment with 1μM sincalide before exposure to 1μM Ang II significantly prevented cell death.

Animal experiment [2]:

Animal models	Male Sprague-Dawley rats (200-220g, 6-7 weeks)
Preparation Method	Sincalide was dissolved in sterile normal saline to form a 50μg/mL stock solution. Male Sprague-Dawley rats were separated into 3 groups: sham operation, MI+NaCl, and MI+sincalide. All rats were subjected to left coronary artery ligation to induce MI or sham operation and then treated with sincalide or saline for 28 days.
Dosage form	50μg/kg/d sincalide，intraperitoneal injection
Applications	Treatment with sincalide attenuated myocardial infarction-induced myocardial fibrosis, and delay the left ventricular remodeling and the progress of heart failure.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

References:

[1]. Wang C, Yu H, et al. Protective effect of cholecystokinin octapeptide on angiotensin II-induced apoptosis in H9c2 cardiomyoblast cells. J Cell Biochem. 2020;121(7):3560-3569.

[2]. Wang C, Zhang C, et al. Cholecystokinin octapeptide reduces myocardial fibrosis and improves cardiac remodeling in post myocardial infarction rats. Int J Biochem Cell Biol. 2020;125:105793.

Background

Sincalide(CCK-8) is a minor bioactive segment of CCK that retains most of the biological activities of CCK and is widely used to study CCK functions[1]. Sincalide is a rapid-acting, synthetic analog of cholecystokinin for intravenous use in postevacuation cholecystography, and has a variety of effects as a novel cardiovascular hormone[2,3].

Sincalide protects H9c2 cardiomyoblasts from Ang II-induced apoptosis partly via activation of the CCK1 receptor and the phosphatidyqinositol-3 kinase/protein kinase B (PI3K/Akt) signaling pathway[1]. Sincalide can protect human retinal pigment epithelial cells against apoptosis induced by peroxynitrite[4]. Sincalide dose-dependently inhibited METH-induced cytotoxic effect by activating the CCK2 receptor subtype in PC12 cells and CCK2 receptor stable transfected-HEK293 cells[5]

Product Data Sheet

Sincalide can alleviate fibrosis in the noninfarcted regions and delay the left ventricular remodeling and the progress of heart failure in a MI rat model[2]. Sincalide decreased RPE cells apoptosis partly induced by ONOO- in Sprague-Dawley rats and is a potential drug for therapy of diabetic retinopathy[6]. Intramuscular injection of sincalide (0.07μg/kg) induced remarkable contractions of the gallbladder in vivo, and the contraction was nearly abolished by premedication of atropine sulfate (0.015 mg/kg)[7]

References:

[1]. Wang C, Yu H, et al. Protective effect of cholecystokinin octapeptide on angiotensin II-induced apoptosis in H9c2 cardiomyoblast cells. J Cell Biochem. 2020;121(7):3560-3569.
[2]. Wang C, Zhang C, et al. Cholecystokinin octapeptide reduces myocardial fibrosis and improves cardiac remodeling in post myocardial infarction rats. Int J Biochem Cell Biol. 2020;125:105793.
[3]. Maher KA. Kinevac (sincalide for injection)/Squibb Diagnostics. Gastroenterol Nurs. 1991;14(2):98-100.
[4]. Liu Y, Zhang Y, et al. Cholecystokinin octapeptide antagonizes apoptosis in human retinal pigment epithelial cells. Neural Regen Res. 2014;9(14):1402-1408.
[5]. Wen D, An M, et al. Cholecystokinin-8 inhibits methamphetamine-induced neurotoxicity via an anti-oxidative stress pathway. Neurotoxicology. 2016;57:31-38.
[6]. Hao LN, Wang M, et al. Control of peroxyntrite-induced production of inducible nitric oxide synthase isoforms and antagonism of cholecystokinin octapeptide -8 in retinal pigment epithelial cells in vivo. Int J Ophthalmol. 2011;4(6):605-610.
[7]. Takahashi T, Yamamura T, et al. Effects of cholecystokinin-octapeptide on the human gallbladder both in vivo and in vitro. Gastroenterol Jpn. 1986;21(1):49-54.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA