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：MYOSIN LIGHT CHAIN KINASE INHIBITOR PEPTIDE 18
产品别名：MLCK inhibitor peptide 18

生物活性：

Description	MLCK inhibitor peptide 18 is a myosin light chain kinase (MLCK) inhibitor with an IC50 of 50 nM, and inhibits CaM kinase II only at 4000-fold higher concentrations.
IC_{50} & Target	IC50: 50 nM (MLCK)[1]
In Vitro	MLCK inhibitor peptide 18 has a selective effect on peptide substrate utilization by MLCK, does not interfere with kinase activation by CaM, does not have significant inhibitory activity with the closely related CaMPKII, and does not inhibit PKA[1].

Solvent&Solubility

In Vitro:

H_2O : 50 mg/mL (37.75 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.7549 mL	3.7747 mL	7.5493 mL
	5 mM	0.1510 mL	0.7549 mL	1.5099 mL
	10 mM	0.0755 mL	0.3775 mL	0.7549 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°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。

References	[1]. Lukas TJ, et al. Identification of novel classes of protein kinase inhibitors using combinatorial peptide chemistry based on functional genomics knowledge. J Med Chem. 1999 Mar 11;42(5):910-9.

实验参考：

Kinase Assay	All assays are done in a final volume of 50 µL. Each point is tested in duplicate. The standard assay conditions are 50 mM HEPES, 0.2 mM [γ-^{32}P]ATP (specific activity 200−300 cpm/pmol), 1 mM DTT, 1 mg/mL bovine serum albumin, 5 mM $MgCl_2$, 150 mM KCl, 15 mM NaCl, pH 7.5, with or without inhibitors. Synthetic substrate concentrations, KKRPQRATSNVFAM-NH2 for MLCK, PLRRTLSVAA-NH2 for CaMPKII, and LRRASLG for PKA, are 20 µM. The reactions are initiated with the addition of 5 µL of enzyme (PKA) or enzyme:CaM complex (for MLCK and CaMPKII). Enzyme:CaM complexes are preformed by incubation of enzyme in ice for 1 min in the presence of 1 µM CaM and 5 µM $CaCl_2$ (for MLCK) or 30 µM CaM and 2 mM $CaCl_2$ (for CaMPKII). Assay conditions are 20 min, 25°C for MLCK; 8 min, 25°C for CaMPKII; 6 min, 25°C for PKA. Aliquots of each reaction tube are spotted into phosphocellulose filter paper. Filters are washed in 75 mM phosphoric acid solution, followed by 95% ethanol, dried, and placed into vials containing 10 mL of Ecoscint O. Radioactivity is determined by counting vials in a Beckman 6500 liquid scintillation counter. No quenching corrections are applied. Data are transformed as percent of the maximal enzyme activity, where enzyme activity in the absence of inhibitors is taken as 100%. ICsub>50 values are calculated by a linear regression data analysis on data points corresponding to 15%−85% of maximal activity. This analysis is done using InPlot version 4.0. [1]

References	[1]. Lukas TJ, et al. Identification of novel classes of protein kinase inhibitors using combinatorial peptide chemistry based on functional genomics knowledge. J Med Chem. 1999 Mar 11;42(5):910-9.