Product Data Sheet

Product Name: E6 Berbamine
Cat. No.: GC16287

Chemical Properties

Cas. No.	114784-59-7		
Chemical Name	3,4,4aS,5,16aR,17,18,19-octahydro-21,22,26-trimethoxy-4,17-dimethyl-16H-1,24:6,9-dietheno-11,15-metheno-2H-pyrido[2',3':17,18][1,11]dioxacycloeicosino[2,3,4-ij]isoquinolin-12-ol-4-nitrobenzoate		
SMILES	COC1=C(C2=C(CCN([C@]2([H])CC3=CC=C(OC(C4=CC=C([N+]([O-])=O)C=C4)=O)C(OC5=CC=C(C[C@@]67[H])C=C5)=C3)C)C=C1OC)OC8=CC6=C(CCN7C)C=C8OC		
Formula	$C_{44}H_{43}N_3O_9$	M.Wt	757.8
Solubility	≤25mg/ml in ethanol;25mg/ml in DMSO	Storage	Store at -20°C
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	E6 Berbamine		

Background

E6 Berbamine is a calmodulin inhibitor.

Calmodulin, the ubiquitous and multifunctional Ca2+-binding protein, can mediate various regulatory effects of Ca2+, such as the contractile state of smooth muscle. In smooth muscle, the main function of calmodulin is to activate crossbridge cycling and the development of force in response to Ca2+ transient through the activation of myosin light-chain kinase and myosin phosphorylation.

In vitro: The results from a previous study showed that the inhibition of MLCK activity could be increased with increasing levels of E6 Berbamine and was completely overcome by the addition of excessive Ca2+. In addition, the stimulatory activity of MLCK induced by Ca2+ was gradually inhibited by the increasing concentrations of E6 Berbamine suggesting that the inhibition of MLCK activity by E6 Berbamine was concentration dependent. In addition, E6 Berbamine could diminish the fluorescence intensity of dansyl-labeled Ca2+. E6 Berbamine showed no effect on the activity of MLCK fragments produced by limited trypsinization, a novel and considerably potent calmodulin antagonist [1].

In vivo: So far, there is no animal in vivo data reported.

Clinical trial: Up to now, E6 Berbamine is still in the preclinical development stage.

Reference:
[1] Z. Y. Hu, Y. S. Gong and W. L. Huang. Interaction of berbamine compound E6 and calmodulin-dependent myosin light chain kinase. Biochemical Pharmacology44(8), 1543-1547 (1992).

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