Product Data Sheet

Product Name: PD 145305
Cat. No.: GC13450

Chemical Properties

Cas. No.	90536-15-5		
Chemical Name	α-mercapto-benzenepropanoic acid		
SMILES	OC(C(S)CC1=CC=CC=C1)=O		
Formula	$C_9H_{10}O_2S$	M.Wt	182.2
Solubility	≤20mg/ml in ethanol;20mg/ml in DMSO;20mg/ml in dimethyl formamide	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	PD 145305		

Background

PD 145305 is an inactive analog of PD 150606, a potent and selective calpains inhibitor [1].

Calpain is a class of cytosolic cysteine protease that is activated by elevated intracellular calcium. Overactivation of calpain has been implicated in the pathophysiology of several degenerative conditions, including stroke, myocardial ischemia, neuromuscular degeneration, and cataract formation [1].

PD 145305 is an inactive analog of PD 150606, a potent and selective calpains inhibitor. PD 150606, an alpha-mercaptoacrylate derivative, inhibited μ-calpain and m-calpain with Ki values of 0.21 and 0.37 μM, respectively. PD 145305 was inactive at concentrations up to 500 μM. In human leukemic Molt-4 cells, PD150606 inhibited a-spectrin proteolysis in a dose-dependent way and virtually eliminated the formation of the 145-kDa fragment at 10 μM, whereas PD145305 did not attenuate a-spectrin breakdown product formation.

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

Product Data Sheet

In fetal rat cerebrocortical cultures subjected to a combination of hypoxia and hypoglycemia, PD150606 significantly inhibited the release of lactate dehydrogenase, whereas PD145305 was ineffective. PD150606, but not PD145305, was found to make cerebral glutamatergic neurons more resistant to hypoxic/hypoglycemic challenge [1].

Reference:

[1]. Wang KK, Nath R, Posner A, et al. An alpha-mercaptoacrylic acid derivative is a selective nonpeptide cell-permeable calpain inhibitor and is neuroprotective. Proc Natl Acad Sci U S A. 1996 Jun 25;93(13):6687-92.

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