Product Data Sheet

Product Name: PPACKII (trifluoroacetate salt)
Cat. No.: GC17711

Chemical Properties

Cas. No.	649748-23-2		
Chemical Name	D-phenylalanyl-N-[(1S)-4-[(aminoiminomethyl)amino]-1-(chloroacetyl)butyl]-L-phenylalaninamide, *bis*(trifluoroacetate)		
SMILES	O=C([C@@H](CC1=CC=CC=C1)N)N[C@@H](CC2=CC=CC=C2)C(N[C@H](C(CCl)=O)CCCNC(N)=N)=O.FC(F)(C(O)=O)F.FC(F)(C(O)=O)F		
Formula	$C_{25}H_{33}ClN_6O_3 \cdot 2CF_3COOH$	M.Wt	729.1
Solubility	≤30mg/ml in ethanol;30mg/ml in DMSO;30mg/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	PPACKII (trifluoroacetate salt)		

Background

PPACKII is a specific and irreversible inhibitor of glandular and plasma kallikreins [1].

Human tissue kallikreins (hKs) are a class of secreted serine proteases that involved in the release of vasodepressor peptides or kinins from a plasma substrate. Kallikrein has diverse expression patterns and physiological roles. Kallikrein has been primarily known as cancer biomarkers. Kallikrein has been implicated in many cancer-related processes, such as cell-growth regulation, angiogenesis, invasion and metastasis. Kallikrein could promote or inhibit neoplastic progression individually and/or with the interaction in cascades with other hKs and proteases [2].

PPACKII prevented apolipoprotein proteolysis in dextran sulfate-precipitated human plasma LDL and inhibited serum atrial natriuretic peptide cleavage at micromolar

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concentrations [1]. It has been reported that PPACKII inactivated the amidolytic activity of native human Hageman Factor (Factor XII) at 5.3 μM [3].

References:

[1]. Byrne R E, Scanu A M. Apolipoprotein B-100 of plasma low density lipoproteins undergoes proteolysis by contact activation factors when plasma is treated with dextran sulfate-500-MgCl2[J]. Journal of lipid research, 1989, 30(1): 109-120.
[2]. Borgoo C A, Diamandis E P. The emerging roles of human tissue kallikreins in cancer[J]. Nature Reviews Cancer, 2004, 4(11): 876-890.
[3]. Silverberg M, Kaplan A P. Enzymatic activities of activated and zymogen forms of human Hageman factor (factor XII)[J]. Blood, 1982, 60(1): 64-70.