Product Data Sheet

Product Name: Carnostatine hydrochloride
Cat. No.: GC38897

Chemical Properties

Cas. No.			
SMILES	OC([C@@H](NC([C@@H](O)CCN)=O)CC1=CNC=N1)=O.Cl		
Formula	$C_{10}H_{17}ClN_4O_4$	M.Wt	292.72
Solubility	Water: ≥ 250 mg/mL (854.06 mM)	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	Carnostatine hydrochloride		

Background

Carnostatine hydrochloride (SAN9812 hydrochloride) is a potent and selective carnosinase 1 (CN1) inhibitor with a Ki of 11 nM for human recombinant CN1. Carnostatine hydrochloride can be used for the treatment of diabetic nephropathy (DN) [1].

Carnostatine (SAN9812) also inhibits CN1 activity in human serum and serum of transgenic mice-overexpressing human CN1. Carnostatine, with an IC50 value of 18 nM on human recombinant CN1 at a carnosine concentration of 200 μM, i.e., close to the Km of 190 μM[1].

Subcutaneous administration of 30 mg/kg Carnostatine (SAN9812) leads to a sustained reduction in circulating CN1 activity in human CN1 transgenic (TG) mice. Simultaneous administration of Carnosine and Carnostatine increases carnosine levels in plasma and kidney by up to 100-fold compared to treatment-naÏve CN1-overexpressing mice[1]. Animal Model: Human carnosinase (CNDP1) transgenic mice on a BTBR wt/ob background[1]

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[1]. Qiu J, et al. Identification and characterisation of carnostatine (SAN9812), a potent and selective carnosinase (CN1) inhibitor with in vivo activity. Amino Acids. 2019 Jan;51(1):7-16.

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