Product Data Sheet

Product Name: TCS HDAC6 20b
Cat. No.: GC12019

Chemical Properties

Cas. No.	956154-63-5		
Chemical Name	S-((S)-7-((3R,5R,7R)-adamantan-1-ylamino)-6-((tert-butoxycarbonyl)amino)-7-oxoheptyl) 2-methylpropanethioate		
SMILES	CC(C(SCCCCC[C@H](NC(OC(C)(C)C)=O)C(NC1(C[C@H](C2)C3)C[C@H]3C[C@H]2C1)=O)=O)C		
Formula	$C_{26}H_{44}N_2O_4S$	M.Wt	480.7
Solubility	DMSO: 20 mg/ml,Ethanol: 20 mg/ml	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	TCS HDAC6 20b		

Background

TCS HDAC6 20b is a potent and selective inhibitor of histone deacetylase 6 (HADC6) [1].

Histone deacetylases (HADC) are a series of enzymes that remove acetyl groups from an ε-N-acetyl lysine amino acid on a histone and make the histones to wrap the DNA more tightly, which prevent transcription. Mutation of HADC6 is associated with Alzheimer's disease.

In HCT116 cells, TCS HDAC6 20b increased α-tubulin acetylation in a dose-dependent way without a significant increase in acetylated histone H4, which indicated that TCS HDAC6 20b selectively inhibit HDAC6 [1]. Treatment human colon cancer HCT116 cells with TCS HDAC6 20b (5 μM) and paclitaxel (PTX) (0.03 μM) inhibited cells growth by approximately 50%, which suggested that TCS HDAC6 20b has potential as drug candidates when used with PTX. In estrogen receptor α (ERα) -positive breast cancer MCF-7 cells, treatment with 17β-estradiol (E2) (1 nM) increased cell growth by 40%,

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which was significantly blocked by TCS HDAC6 20b [2].

References:

[1]. Suzuki T, Kouketsu A, Itoh Y, et al. Highly potent and selective histone deacetylase 6 inhibitors designed based on a small-molecular substrate. J Med Chem, 2006, 49(16): 4809-4812.

[2]. Itoh Y, Suzuki T, Kouketsu A, et al. Design, synthesis, structure--selectivity relationship, and effect on human cancer cells of a novel series of histone deacetylase 6-selective inhibitors. J Med Chem, 2007, 50(22): 5425-5438.

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