Product Data Sheet

Product Name: BML-210(CAY10433)
Cat. No.: GC12822

Chemical Properties

Cas. No.	537034-17-6		
Chemical Name	(1Z,8Z)-N'1-(2-aminophenyl)-N'8-phenyloctanebis(imidic acid)		
SMILES	NC1=CC=CC=C1/[*]=C(O)/CCCCCC/C(O)=N/C2=CC=CC=C2		
Formula	$C_{20}H_{25}N_3O_2$	M.Wt	339.43
Solubility	≥ 10.5mg/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	BML-210(CAY10433)		

Background

BML-210 (CAY10433) is a novel HDAC inhibitor with IC50 value of 87 μM [1].

Histone deacetylases (HDACs) are a class of enzymes that remove acetyl groups from ε-N-acetyl lysines on histones, allowing the histones to wrap the DNA more tightly. DNA expression is regulated by de-acetylation and acetylation.

BML-210 (CAY10433) is a novel HDAC inhibitor. In FRDA lymphoid cell line (GM15850), BML-210 increased the level of FXN mRNA by 1.4-fold [1]. In the human leukemia cell lines (NB4, HL-60, THP-1, and K562), BML-210 induced G1 arrest and histone H4 acetylation, affected NF-κB and Sp1 binding to the p21 or the FasL promoters, and influenced expression of Sp1, NF-κB, p21 and FasL. BML-210 inhibited cell growth and induced apoptosis in a time- and dose-dependent way. BML-210 also induced K562 and HL-60 cell differentiation (up to 30%) to erythrocytes and granulocytes, respectively [2]. In HeLa cells, BML-210 (20 or 30 μM) increased the amount of cells in G0/G1 phase, caused sub-G1 accumulation, and induced apoptosis [3]. In human promyelocytic

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leukemia NB4 cells, BML-210 inhibited cell growth in a dose- and time-dependent way [4].

References:

[1]. Herman D, Jenssen K, Burnett R, et al. Histone deacetylase inhibitors reverse gene silencing in Friedreich's ataxia. Nat Chem Biol, 2006, 2(10): 551-558.
[2]. Savickiene J, Borutinskaite VV, Treigyte G, et al. The novel histone deacetylase inhibitor BML-210 exerts growth inhibitory, proapoptotic and differentiation stimulating effects on the human leukemia cell lines. Eur J Pharmacol, 2006, 549(1-3): 9-18.
[3]. Borutinskaite VV, Magnusson KE, Navakauskiene R. Histone deacetylase inhibitor BML-210 induces growth inhibition and apoptosis and regulates HDAC and DAPC complex expression levels in cervical cancer cells. Mol Biol Rep, 2012, 39(12): 10179-10186.
[4]. Borutinskaitė V, Navakauskienė R. The Histone Deacetylase Inhibitor BML-210 Influences Gene and Protein Expression in Human Promyelocytic Leukemia NB4 Cells via Epigenetic Reprogramming. Int J Mol Sci, 2015, 16(8): 18252-18269.