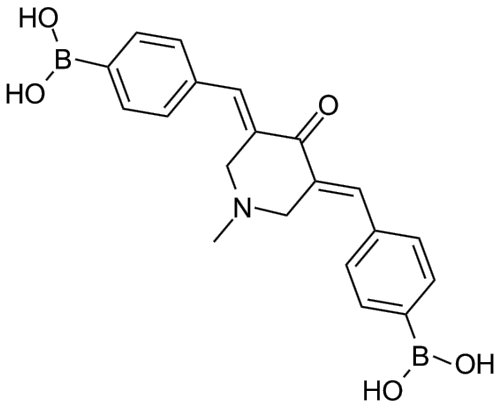
Product Data Sheet

Product Name: AM 114
Cat. No.: GC13789

Chemical Properties

Cas. No.	856849-35-9		
Chemical Name	[4-[(Z)-[(5Z)-5-[(4-boronophenyl)methylidene]-1-methyl-4-oxopiperidin-3-ylidene]methyl] phenyl]boronic acid		
SMILES	B(C1=CC=C(C=C1)C=C2CN(CC(=CC3=CC=C(C=C3)B(O)O)C2=O)C)(O)O		
Formula	$C_{20}H_{21}B_2NO_5$	M.Wt	377.01
Solubility	≥ 16.65mg/mL in DMSO, ≥ 4.11 mg/mL in EtOH with ultrasonic	Storage	Store at 4°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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



Background

AM 114, a derivative of boronic chalcone, is a potent small-molecule inhibitor of the proteasome that

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inhibits the chymotrypsin-like activity of the 20S proteasome, with a value of 50% inhibition concentration IC_{50} of approximately 1 μM, resulting in a significant accumulation of ubiquitinated p53 and other cellular proteins in whole cells without significantly disrupting the interaction of p53 and murine double minute 2 (mdm2) proteins. AM 114 also exerts anti-cancer activity against cancer cells, which potently inhibits the growth of human colon cancer HCT116 cells with values of IC_{50} of 1.5 μM and 0.6 μM in MTT and colony formation assays respectively.

Reference

[1].Achanta G, Modzelewska A, Feng L, Khan SR, Huang P. A boronic-chalcone derivative exhibits potent anticancer activity through inhibition of the proteasome. Mol Pharmacol. 2006 Jul;70(1):426-33. Epub 2006 Apr 24.

Caution: Product has not been fully validated for medical applications. For research use only.
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