

## Certificate of Analysis

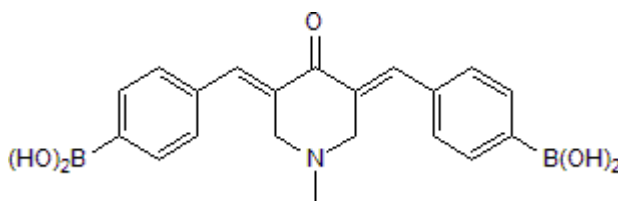
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**Product Name:** AM 114  
**CAS Number:** 856849-35-9  
**IUPAC Name:** 3,5-Bis-[benzylidene-4-boronic acid]-1-methylpiperidin-4-one

**Catalog No.:** 2564 **Batch No.:** 1

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{20}H_{21}B_2NO_5 \cdot \frac{1}{4}H_2O$   
**Batch Molecular Weight:** 381.51  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 10 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.2$  (Dichloromethane:Methanol [9:1])  
**HPLC:** Shows 97.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	62.97	5.68	3.67
Found	62.76	5.6	3.54

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

## Product Information

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### Description:

Inhibitor of the chymotrypsin-like activity of the 20S proteasome ( $IC_{50} \sim 1 \mu M$ ). Displays anticancer activity; inhibits cell growth in human colon cancer HCT116 p53+/+ cells ( $IC_{50} = 1.49 \mu M$ ).

### Physical and Chemical Properties:

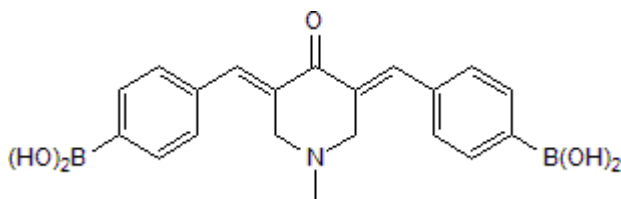
Batch Molecular Formula:  $C_{20}H_{21}B_2NO_5 \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 381.51

Physical Appearance: Yellow solid

**Minimum Purity:** >97%

### Batch Molecular Structure:



**Storage:** Store at +4°C

### Solubility & Usage Info:

DMSO to 10 mM

### Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

### References:

**Achanta et al** (2005) Preferential killing of cancer cells with wild-type p53 by boronic chalcones. *Proc.Am.Assoc.Cancer Res.Abstr.* **46** 6162.

**Achanta et al** (2006) A boronic-chalcone derivative exhibits potent anticancer activity through inhibition of the proteasome. *Mol.Pharmacol.* **70** 426. PMID: 16636137.

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