

**Product Name:** AM 114

**Catalog No.:** 2564

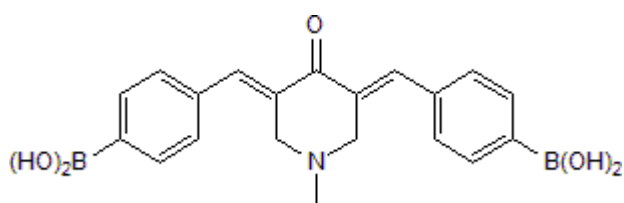
**Batch No.:** 1

**CAS Number:** 856849-35-9

**IUPAC Name:** 3,5-Bis-[benzylidene-4-boronic acid]-1-methylpiperidin-4-one

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>20</sub>H<sub>21</sub>B<sub>2</sub>NO<sub>5</sub>·¼H<sub>2</sub>O  
**Batch Molecular Weight:** 381.51  
**Physical Appearance:** Yellow powder  
**Solubility:** DMSO to 10 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 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

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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:**

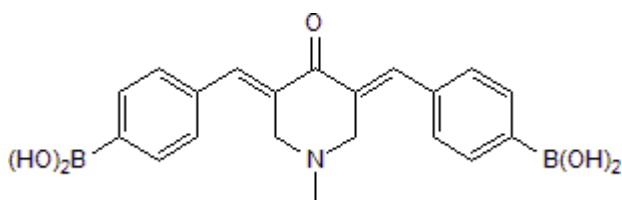
Batch Molecular Formula:  $C_{20}H_{21}B_2NO_5 \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 381.51

Physical Appearance: Yellow powder

**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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