

## PRODUCT INFORMATION

## AM114

Item No. 42040

**CAS Registry No.:** 856849-35-9

**Formal Name:** B,B'-[(1-methyl-4-oxo-3,5-piperidinediylidene)*bis*(methylidyne-4,1-phenylene)]*bis*-boronic acid

**Synonym:** Proteasome Inhibitor IX

**Synonym:**

MF:  $C_{20}H_{21}B_2NO_5$

FW: 377.0

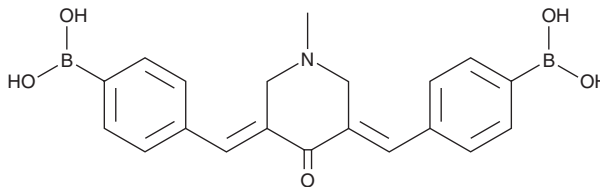
Purity:  $\geq 95\%$ 

Supplied as: A solid

**Storage:** -20°C

**Stability:**  $\geq 4$  years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



## Laboratory Procedures

AM114 is supplied as a solid. A stock solution may be made by dissolving the AM114 in the solvent of choice, which should be purged with an inert gas. AM114 is slightly soluble (0.1-1 mg/ml) in methanol.

## Description

AM114 is an inhibitor of the 20S proteasome ( $IC_{50} = \sim 1 \mu M$ ).<sup>1</sup> It induces the accumulation of ubiquitinated proteins in HCT116 colon cancer cells when used at a concentration of  $1 \mu M$ . AM114 sensitizes HCT116 p53<sup>+/+</sup> and HCT116 p53<sup>-/-</sup> cells to ionizing radiation-induced cytotoxicity in an additive and synergistic manner, respectively. It decreases the viability of macrophages isolated from patients with rheumatoid arthritis ( $IC_{50} = 0.88 \mu M$ ).<sup>2</sup>

## References

1. Achanta, G., Modzelewska, A., Feng, L., *et al.* A boronic-chalcone derivative exhibits potent anticancer activity through inhibition of the proteasome. *Mol. Pharmacol.* **70**(1), 426-433 (2006).
2. Chitra, S., Nalini, G., Lokeswari, T.S., *et al.* The effect of proteasome inhibitor (AM114) on apoptosis in IL-1 $\beta$ -treated peripheral blood macrophage cultured cells from rheumatoid arthritis patients. *Indian J. Rheumato.* **11**(1), 7-13 (2016).

### WARNING

**THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

## SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

## WARRANTY AND LIMITATION OF REMEDY

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