

## Certificate of Analysis

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**Product Name:** 10Z-Hymenialdisine

**Catalog No.:** 1532

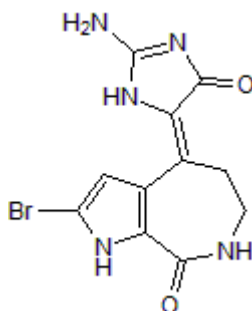
**Batch No.:** 1

**CAS Number:** 82005-12-7

**IUPAC Name:** (4Z)-4-(2-Amino-1,5-dihydro-5-oxo-4H-imidazol-4-ylidene)-2-bromo-4,5,6,7-tetrahydropyrrolo[2,3-c]azepin-8(1H)-one

### 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>11</sub> H <sub>10</sub> BrN <sub>5</sub> O <sub>2</sub>
<b>Batch Molecular Weight:</b>	324.13
<b>Physical Appearance:</b>	Yellow solid
<b>Solubility:</b>	DMSO to 10 mM
<b>Storage:</b>	Store at -20°C
<b>Batch Molecular Structure:</b>	



### 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows >99% purity
<b><sup>1</sup>H NMR:</b>	Consistent with structure

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

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**Description:**

Pan kinase inhibitor (IC<sub>50</sub> values are 6, 10, 22, 28, 35, 40, 70, 80, 100, 470, 500, 600, 700 and 700 nM for MEK1, GSK-3β, Cdk1/cyclin B, Cdk5/p25, CK1, Cdk2/cyclin A, Cdk2/cyclin E, ASK-γ, Cdk3/cyclin E, Erk1, PKCγ, Cdk4/cyclin D1, Cdk6/cyclin D2 and PKCα respectively.) Inhibits NF-κB activation and blocks IL-8 production in U937 cells (IC<sub>50</sub> values are 1-2 and 0.34-0.48 μM respectively).

**Physical and Chemical Properties:**

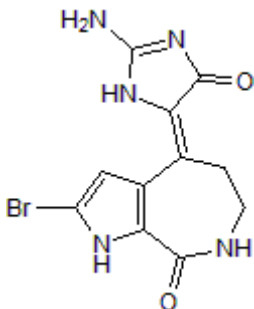
Batch Molecular Formula: C<sub>11</sub>H<sub>10</sub>BrN<sub>5</sub>O<sub>2</sub>

Batch Molecular Weight: 324.13

Physical Appearance: Yellow solid

**Minimum Purity:** >97%

**Batch Molecular Structure:**



**Storage:** Store at -20°C. This product is packaged under an inert atmosphere.

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 10 mM

The quoted HPLC value is for the sum of E/Z isomers. The E isomer readily converts to the Z isomer in solution in DMSO (JMC, 2002, 45, 2, 529-532)

**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:**

**Breton and Chabot-Fletcher** (1997) The natural product hymenialdisine inhibits interleukin-8 production in U937 cells by inhibition of nuclear factor-κB. *J.Pharmacol.Exp.Ther.* **282** 459. PMID: 9223588.

**Meijer et al** (2000) Inhibition of cyclin-dependent kinases, GSK-3β and CK1 by hymenialdisine, a marine sponge constituent. *Chem.Biol.* **7** 51. PMID: 10662688.

**Tasdemir et al** (2002) Aldisine alkaloids from the Philippine sponge *Stylissa massa* are potent inhibitors of mitogen-activated protein kinase kinase-1 (MEK-1). *J.Med.Chem.* **45** 529. PMID: 11784156.

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