AdipoGen®
www.adipogen.com

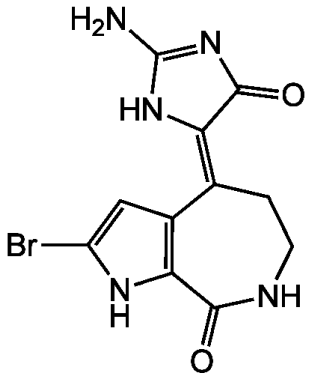
PRODUCT DATA SHEET

AG-CN2-0067

06-Oct-2012

10Z-Hymenialdisine

[Hymenialdisine; 4-(2-Amino-4-oxo-2-imidazolidin-5-ylidene)-2-bromo-4,5,6,7-tetrahydropyrrolo[2,3-c]azepin-8-one]



AG-CN2-0067-C500	500 µg
AG-CN2-0067-M001	1 mg
Formula	$C_{11}H_{10}BrN_5O_2$
MW	324.1
CAS	82005-12-7

Handling / Storage

Shipping	AMBIENT
Short Term Storage	+4°C
Long Term Storage	-20°C

Keep cool and dry. Keep under inert gas. Protect from light.

Use / Stability

Stable for at least 2 years after receipt when stored at -20°C.

MSDS available at www.adipogen.com or upon request.

Product Specifications

Source/Host	Isolated from sponge *Axinella carteri*.
Purity	≥97% (HPLC) (Contains traces of the 10E-isomer)
Identity	Determined by ^{1}H-NMR.
Appearance	Yellow oil.
Solubility	Soluble in DMSO.

Product Description

- Insecticidal and cytotoxic [1].
- Potent NF-κB inhibitor. Inhibits various pro-inflammatory cytokines such as IL-1, IL-2, IL-6, IL-8, TNF-α and nitric oxide (NO) in a variety of cell lines [2, 3, 4, 9].
- ATP-competitive kinase inhibitor. Inhibits DNA damage checkpoint at G2, cyclin-dependent kinases CDK1/cyclin B, CDK2/cyclin A, CDK2/cyclin E, CDK4/cyclin D1, CDK5/p25, GSK-3β and casein kinase 1 (CK1) [5, 6].
- Potent mitogen-activated protein kinase kinase-1 (MEK-1) inhibitor [7].
- MARK (microtubule affinity-regulating kinase) inhibitor [8].

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Product Specific References

1. Bioactive alkaloids from the tropical marine sponge Axinella carteri: A. Supriyono, et al.; Z. Naturforsch. [C] **50,** 669 (1995)
2. The natural product hymenialdisine inhibits interleukin-8 production in U937 cells by inhibition of nuclear factor-kappaB: J.J. Breton & M.C. Chabot-Fletcher; J. Pharmacol. Exp. Ther. **282,** 459 (1997)
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4. Inhibition of interleukin-1-induced proteoglycan degradation and nitric oxide production in bovine articular cartilage/chondrocyte cultures by the natural product, hymenialdisine: A.M. Badger, et al.; J. Pharmacol. Exp. Ther. **290,** 587 (1999)
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7. Aldisine alkaloids from the Philippine sponge Stylissa massa are potent inhibitors of mitogen-activated protein kinase kinase-1 (MEK-1): D. Tasdemir, et al.; J. Med. Chem. **45,** 529 (2002)
8. Protein kinase MARK/PAR-1 is required for neurite outgrowth and establishment of neuronal polarity: J. Biernat et al.; Mol. Biol. Cell. **13,** 4013 (2002)
9. Inhibition of cytokine production by hymenialdisine derivatives: V. Sharma, et al.; J. Med. Chem. **47,** 3700 (2004)

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