

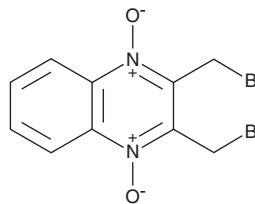
# PRODUCT INFORMATION



## Conoidin A

Item No. 15605

**CAS Registry No.:** 18080-67-6  
**Formal Name:** 2,3-bis(bromomethyl)-quinoxaline 1,4-dioxide  
**MF:** C<sub>10</sub>H<sub>8</sub>Br<sub>2</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 348.0  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 240, 278, 391 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Conoidin A is supplied as a crystalline solid. A stock solution may be made by dissolving the conoidin A in the solvent of choice, which should be purged with an inert gas. Conoidin A is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of conoidin A in these solvents is approximately 20 and 25 mg/ml, respectively.

Conoidin A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, conoidin A should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Conoidin A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Peroxiredoxins are a widely conserved family of enzymes that function in antioxidant defense and act in redox signaling pathways. Increased expression of human peroxiredoxin is associated with cancer, cardiovascular dysfunction, and neurodegeneration. Conoidin A inactivates peroxiredoxins by covalently binding to the catalytic cysteine on the enzyme.<sup>1,2</sup> It has been shown to inhibit peroxiredoxin II (IC<sub>50</sub> = 23 μM) in the parasite *T. gondii* and peroxiredoxin I in the hookworm *A. ceylanicum*.<sup>1-3</sup> At 5 μM, conoidin A can also inhibit the glucose oxidase-mediated hyperoxidation of mammalian peroxiredoxin I and II, but not peroxiredoxin III.<sup>1</sup>

### References

1. Haraldsen, J.D., Liu, G., Botting, C.H., *et al.* Identification of conoidin A as a covalent inhibitor of peroxiredoxin II. *Org. Biomol. Chem.* **7**, 3040-3048 (2009).
2. Nguyen, J.B., Pool, C.D., Wong, C.Y., *et al.* Peroxiredoxin-1 from the human hookworm *Ancylostoma ceylanicum* forms a stable oxidized decamer and is covalently inhibited by conoidin A. *Chem. Biol.* **20(8)**, 991-1001 (2013).
3. Liu, G., Botting, C.H., Evans, K.M., *et al.* Optimisation of conoidin A, a peroxiredoxin inhibitor. *ChemMedChem* **5(1)**, 41-45 (2010).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM