

Product Data Sheet

Product Name: CPPD-Q
Cat. No.: GC91673

Chemical Properties

Cas. No. 68054-78-4

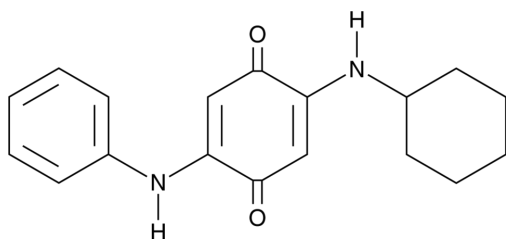
Formula $C_{18}H_{20}N_2O_2$ M.Wt 296.4

Solubility Acetonitrile: Slightly Soluble: 0.1-1 mg/ml Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

CPPD-Q is an oxidized derivative of the antioxidant CPPD, possessing antibacterial and insecticidal effects. CPPD-Q exhibits toxicity to *Vibrio fischeri* ($EC_{50}=6.98\text{mg/L}$). CPPD-Q exerts its insecticidal effect by inducing the production of reactive oxygen species (ROS) in the intestine of *Caenorhabditis elegans*. CPPD-Q can be used in research related to antibacterial agents and insecticides [1-4].

References:

- [1] Wang W, Chen Y, Fang J, et al. Toxicity of substituted p-phenylenediamine antioxidants and their derived novel quinones on aquatic bacterium: Acute effects and mechanistic insights. J Hazard Mater. 2024 May 5;469:133900.
- [2] Wang Y, Liang G, Chao J, et al. Comparison of intestinal toxicity in enhancing intestinal permeability and in causing ROS production of six PPD quinones in *Caenorhabditis elegans*. Sci Total Environ. 2024 Jun 1;927:172306.

Caution: Product has not been fully validated for medical applications. For research use only.

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[3] Fu Z, Mao W, Qu J, et al. Mitochondrial DNA copy number mediates PPD-Qs-induced lipid level alterations in humans. *Ecotoxicol Environ Saf.* 2026 Apr 1;314:120047.

[4] Zhang S, Zhou Z, Wang P, et al. Oxidative damage induced by daily exposure to primary and emerging aromatic amines: Insights from large scale biomonitoring and cell-based high-throughput PCR array analysis. *J Hazard Mater.* 2025 Sep 15;496:139300.

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