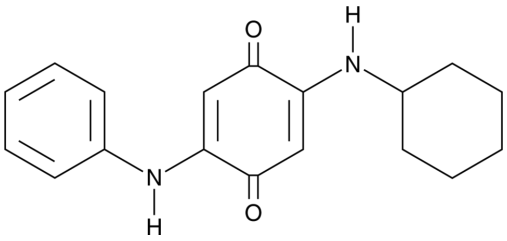
Product Data Sheet

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°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°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}=6.98mg/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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