

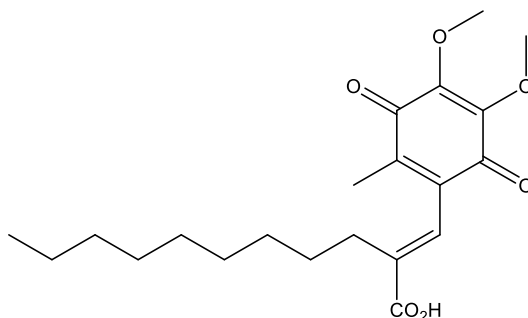
Catalog #10-4000

E3330

CAS# 136164-66-4

(2E)-2-[(4,5-Dimethoxy-2-methyl-3,6-dioxocyclohexa-1,4-dien-1-yl)methylidene]undecanoic acid; (2E)-3-[5-(2,3-Dimethoxy-6-methyl-1,4-benzoquinoyl)]-2-nonyl-2-propenoic acid

Lot # FBS4049



E3330 is a hepatoprotective benzoquinone that inhibits TNF- α release via decreasing NF κ B activation.^{1,2} It also is an inhibitor of AP endonuclease 1 (APE1) redox function.³ E3330 acts synergistically with cisplatin to increase cytotoxicity and impair cell migration and invasion in non-small cell lung cancer.⁴ Inhibition of APE1 with E3330 induces ferroptosis *via* impairment of AKT phosphorylation ultimately leading to Nrf2 degradation.⁵ It sensitizes osteosarcoma cells to ionizing radiation *via* ferroptosis induction.⁶

- 1) Nagakawa *et al.* (1992), *Protective effects of (2E)-3-[5-(2,3-dimethoxy-6-methyl-1,4-benzoquinoyl)]-2-nonyl-2-propenoic acid*; J. Pharmacol. Exp. Ther. **262** 145
- 2) Goto *et al.* (1996), *Inhibitory effect of E3330, a novel quinone derivative able to suppress tumor necrosis factor-alpha generation, on activation of nuclear factor-kappa B*; Mol. Pharmacol. **49** 860
- 3) Zou and Maitra *et al.* (2008), *Small-molecule inhibitor of AP endonuclease 1/REF-1 E3330 inhibits pancreatic cancer cell growth and migration*; Mol. Cancer Ther. **7** 2012
- 4) Manguinhas *et al.* (2020), *Impact of the APE1 Redox Function Inhibitor E3330 in Non-small Cell Lung Cancer Cells Exposed to Cisplatin: Increased Cytotoxicity and Impairment of Cell Migration and Invasion*; Antioxidants (Basel) **9** 550
- 5) Du *et al.* (2024), *APE1 inhibition enhances ferroptotic cell death and contributes to hepatocellular carcinoma therapy*; Cell Death Differ. **31** 431
- 6) Xiao *et al.* (2024), *Inhibitors of APE1 redox and ATM synergistically sensitize osteosarcoma cells to ionizing radiation by inducing ferroptosis*; Int. Immunopharmacol. **139** 112672

PHYSICAL DATA

Molecular Weight:	378.47
Molecular Formula:	C ₂₁ H ₃₀ O ₆
Purity:	>98% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (>50 mg/mL)
Physical Description:	Orange solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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