

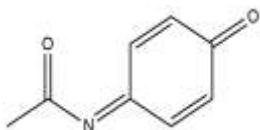
## PRODUCT: N-Acetyl-4-benzoquinone Imine

ALTERNATE NAME: N-(4-oxo-2,5-cyclohexadien-1-ylidene)-acetamide; NAPQI

CATALOG #: B2306-1,5

AMOUNT: 1 mg, 5 mg

### STRUCTURE:



MOLECULAR FORMULA: C<sub>8</sub>H<sub>7</sub>NO<sub>2</sub>

MOLECULAR WEIGHT: 149.2

CAS NUMBER: 50700-49-7

APPEARANCE: Pale yellow to dark brown solid

SOLUBILITY: CHCl<sub>3</sub> (1 mg/ml) or EtOAc (1 mg/ml)

PURITY: ≥90% by HPLC

STORAGE: Store at -20°C. Protect from air and light

**DESCRIPTION:** N-Acetyl-4-benzoquinone Imine (NAPQI) is a toxic cytochrome P450 3A4 and 2E1 metabolite of Acetaminophen. At therapeutic doses of acetaminophen, NAPQI is inactivated by conjugation with glutathione. However, following toxic doses of acetaminophen, available liver reserves of glutathione are quickly depleted due to clearance of excess NAPQI, which enables hepatic proteins to become covalently modified by reactive metabolites and eventually results in hepatocyte necrosis.

**REFERENCES:** Qiu, Y., *et al.* (1998). *J. Biol. Chem.* **273**, 17940-17953.

**HANDLING:** Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

### RELATED PRODUCTS:

N-Acetyl-4-benzoquinone Imine (**B2306**)

L-Buthionine-(S,R)-Sulfoximine (**B2305**)

Erastin (**2231**)

EZSolution™ Erastin (**B1502**)

Ferrostatin-1 (**2230**)

Glutathione Peroxidase Colorimetric Assay Kit (**K762**)

ML-162 (**B2304**)

RSL3 (**B2303**)

**USAGE:** **FOR RESEARCH USE ONLY! Not to be used in humans**