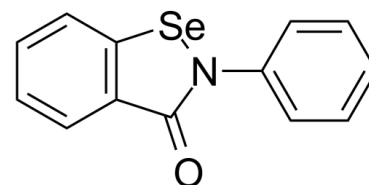


Data Sheet

Product Name:	Ebselen
Cat. No.:	CS-5534
CAS No.:	60940-34-3
Molecular Formula:	C ₁₃ H ₉ NOSe
Molecular Weight:	274.18
Target:	Autophagy; Ferroptosis; HIV; Reactive Oxygen Species
Pathway:	Anti-infection; Apoptosis; Autophagy; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Solubility:	H ₂ O : < 0.1 mg/mL (insoluble); DMSO : 50 mg/mL (182.36 mM); Need ultrasonic)



BIOLOGICAL ACTIVITY:

Ebselen (SPI-1005) is an inhibitor of **HIV-1** capsid CTD dimerization^[1]. Ebselen can permeate the blood-brain barrier and inhibit **inositol monophosphatase (IMPase)**. Ebselen is a non-toxic seleno-organic drug with anti-inflammatory and antioxidant properties^[2]. Ebselen inhibits QSOX1 enzymatic activity and has anticancer activity^[3]. **In Vitro:** Ebselen (SPI-1005) inhibits early viral postentry events of the HIV-1 life cycle by impairing the incoming capsid uncoating process^[1]. Ebselen permeates the blood-brain barrier and inhibits endogenous inositol monophosphatase in mouse brain^[2].

PROTOCOL (Extracted from published papers and Only for reference)

Animal administration [2] All studies used 20-25 g 10-12-week-old male C57Bl6 mice. Mice were injected with ebselen (10 mg/kg) or vehicle (4% w/v hydroxypropyl β-cyclodextrin) and left for varying amounts of time before euthanization by cervical dislocation, or by CO₂ followed by cervical dislocation. Brains were removed and frozen on dry ice immediately. One hemisphere was homogenized using a Precellys 24-bead mill homogenizer and diluted in Tris buffer (50 mM Tris-HCl, 3 mM MgCl₂, 150 mM KCl, 1 mM EGTA and 0.01% v/v Triton X pH 7.4) to a final concentration of 0.5 mg/ml.

References:

- [1]. Thenin-Houssier S, et al. Ebselen, a Small-Molecule Capsid Inhibitor of HIV-1 Replication. *Antimicrob Agents Chemother.* 2016 Mar 25;60(4):2195-208.
- [2]. Singh N, et al. A safe lithium mimetic for bipolar disorder. *Nat Commun.* 2013;4:1332. doi: 10.1038/ncomms2320.
- [3]. Hanavan PD, et al. Ebselen inhibits QSOX1 enzymatic activity and suppresses invasion of pancreatic and renal cancer cell lines. *Oncotarget.* 2015 Jul 30;6(21):18418-28.

CAIndexNames:

1,2-Benziselenazol-3(2H)-one, 2-phenyl-

SMILES:

O=C1N(C2=CC=CC=C2)[Se]C3=CC=CC=C3

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

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