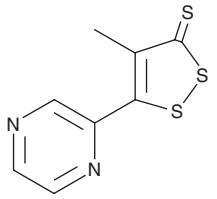
PRODUCT INFORMATION

Oltipraz

Item No. 15118

CAS Registry No.: 64224-21-1
Formal Name: 4-methyl-5-(2-pyrazinyl)-3H-1,2-dithiole-3-thione
Synonyms: NSC 347901, RP 35972
MF: $C_8H_6N_2S_3$
FW: 226.3
Purity: ≥98%
UV/Vis.: λ_{max}: 227, 301, 441 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Oltipraz is supplied as a crystalline solid. A stock solution may be made by dissolving the oltipraz in the solvent of choice, which should be purged with an inert gas. Oltipraz is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of oltipraz in these solvents is approximately 16 mg/ml.

Description

Oltipraz, originally identified as an antischistosomiasis agent, is a potent anticarcinogen in a variety of animal models of cancer at concentrations of ~200 mg/kg.[1] It is an effective inducer of phase I and II detoxifying enzymes, including glutathione S-transferases, UDP-glucuronosyltransferases, NAD(P)H:quinone oxidoreductase, microsomal epoxide hydrolase, and aflatoxin aldehyde reductase.[1,2] Induction of these metabolic enzymes by oltipraz has been linked to the transcription factor nuclear factor E2-related factor 2 and its activation of the antioxidant response element.[1] In mice, oltipraz at 150 mg/kg can also induce expression of CYP2B, a gene regulated by the constitutive androstane receptor, a transcription factor important in the detoxification of endobiotic and xenobiotic substances.[3]

References

1. Kensler, T.W., Qian, G.-S., Chen, J.-G., *et al.* Translational strategies for cancer prevention in liver. *Nat. Rev. Cancer* **3(5)**, 321-329 (2003).
2. Iida, K., Itoh, K., Kumagai, Y., *et al.* Nrf2 is essential for the chemopreventive efficacy of oltipraz against urinary bladder carcinogenesis. *Cancer Res.* **64(18)**, 6424-6431 (2004).
3. Merrell, M.D., Jackson, J.P., Augustine, L.M., *et al.* The Nrf2 activator oltipraz also activates the constitutive androstane receptor. *Drug Metab. Dispos.* **36(8)**, 1716-1721 (2008).

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