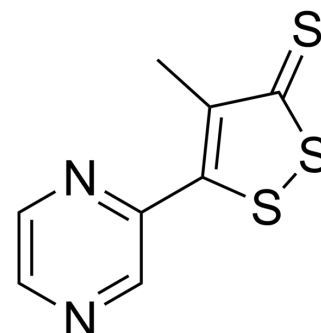


Oltipraz

| | | | |
|---------------------------|---|-------|----------|
| Cat. No.: | HY-12519 | | |
| CAS No.: | 64224-21-1 | | |
| Molecular Formula: | C ₈ H ₆ N ₂ S ₃ | | |
| Molecular Weight: | 226.34 | | |
| Target: | HIF/HIF Prolyl-Hydroxylase; HIV; Keap1-Nrf2; Parasite | | |
| Pathway: | Metabolic Enzyme/Protease; Anti-infection; NF-κB | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 1 year |
| | | -20°C | 6 months |



SOLVENT & SOLUBILITY

| | | | | | |
|---|---|--------------------------|--------------|------------|------------|
| In Vitro | DMSO : 6 mg/mL (26.51 mM; Need ultrasonic and warming) | | | | |
| | | Solvent Concentration | Mass 1 mg | 5 mg | 10 mg |
| | Preparing Stock Solutions | 1 mM | 4.4181 mL | 22.0907 mL | 44.1813 mL |
| | | 5 mM | 0.8836 mL | 4.4181 mL | 8.8363 mL |
| 10 mM | | 0.4418 mL | 2.2091 mL | 4.4181 mL | |
| Please refer to the solubility information to select the appropriate solvent. | | | | | |
| In Vivo | 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1 mg/mL (4.42 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1 mg/mL (4.42 mM); Clear solution | | | | |

BIOLOGICAL ACTIVITY

| | |
|-------------------------------------|--|
| Description | Oltipraz has an inhibitory effect on HIF-1α activation in a time-dependent manner, completely abrogating HIF-1α induction at ≥10 μM concentrations, the IC ₅₀ of Oltipraz for HIF-1α inhibition is 10 μM. Oltipraz is a potent Nrf2 activator. |
| IC₅₀ & Target | IC ₅₀ : 10 μM (HIF-1α) ^[1] ; Nrf2 ^[4] |
| In Vitro | Oltipraz inhibits HIF-1α activity and HIF-1α-dependent tumor growth, which may result from a decrease in HIF-1α stability through S6K1 inhibition in combination with an H ₂ O ₂ -scavenging effect. Oltipraz treatment also inhibits HIF-1α activation stimulated by either hypoxia or CoCl ₂ . Oltipraz is a cancer chemopreventive agent and has an inhibitory effect on angiogenesis and tumor growth. [1] Oltipraz is also a competitive inhibitor of this cytochrome P450, with an apparent K _i of |

10 μ M. [2]

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

In wild-type mice, hepatic levels of mRNA for all of the genes analyzed were significantly increased after Oltipraz treatment, with the highest increase (treated/control) for NQO1 mRNA levels (7.6-fold). The Northern blot analyses demonstrated that the observed increases in GST and NQO1 activities by Oltipraz in wild-type mice were preceded by significant elevations in RNA expression. Interestingly, mRNA levels of Nrf2 itself were increased more than 3-fold by Oltipraz treatment. [2]
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Prolif. 2021 Oct 11;e13142.
- Int J Biol Macromol. 2023 Oct 20:127575.
- Acta Pharmacol Sin. 2020 Aug;41(8):1041-1048.
- Aging Cell. 2021 Oct;20(10):e13483.
- Int Immunopharmacol. 2020 Jul;84:106570.

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REFERENCES

- [1]. Lee WH, et al. Oltipraz and dithiolethione congeners inhibit hypoxia-inducible factor-1alpha activity through p70 ribosomal S6 kinase-1 inhibition and H2O2-scavenging effect. Mol Cancer Ther. 2009 Oct;8(10):2791-802.
- [2]. Ramos-Gomez M, et al. Sensitivity to carcinogenesis is increased and chemoprotective efficacy of enzyme inducers is lost in nrf2 transcription factor-deficient mice. Proc Natl Acad Sci U S A. 2001 Mar 13;98(6):3410-5.
- [3]. Lv S, et al. Glucagon-induced extracellular cAMP regulates hepatic lipid metabolism. J Endocrinol. 2017 Aug;234(2):73-87.
- [4]. Eba S, et al. The nuclear factor erythroid 2-related factor 2 activator oltipraz attenuates chronic hypoxia-induced cardiopulmonary alterations in mice. Am J Respir Cell Mol Biol. 2013 Aug;49(2):324-33.

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

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