

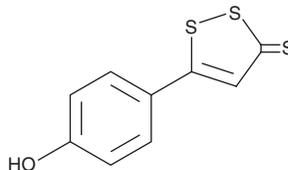
PRODUCT INFORMATION



ADT-OH

Item No. 17102

CAS Registry No.: 18274-81-2
Formal Name: 5-(4-hydroxyphenyl)-3H-1,2-dithiole-3-thione
Synonym: ACS1
MF: C₉H₆OS₃
FW: 226.3
Purity: ≥98%
UV/Vis.: λ_{max}: 234, 354, 430 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

ADT-OH is supplied as a crystalline solid. A stock solution may be made by dissolving the ADT-OH in the solvent of choice, which should be purged with an inert gas. ADT-OH is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ADT-OH in these solvents is approximately 1, 5, and 15 mg/ml, respectively.

ADT-OH is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ADT-OH should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ADT-OH has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ADT-OH is a derivative of anethole dithiolethione (ADT) and synthetic hydrogen sulfide (H₂S) donor. It can be readily esterified with other moieties.¹ For example, it can be coupled with therapeutics like nonsteroidal anti-inflammatory drugs, as in the generation of ATB-343 (Item No. 13045).² ADT-OH has also been linked with a mitochondria-targeting motif to produce AP-39 (Item No. 17100), which selectively increases mitochondrial H₂S levels.³ ADT-OH is used both in cells and in animals for comparative studies with derived chimeras.^{3,4}

References

1. Kashfi, K. and Olson, K.R. Biology and therapeutic potential of hydrogen sulfide and hydrogen sulfide-releasing chimeras. *Biochem. Pharmacol.* **85(5)**, 689-703 (2013).
2. Wallace, J.L. Hydrogen sulfide-releasing anti-inflammatory drugs. *Trends Pharmacol. Sci.* **28(10)**, 501-505 (2007).
3. Szczesny, B., Módis, K., Yanagi, K., et al. AP39, a novel mitochondria-targeted hydrogen sulfide donor, stimulates cellular bioenergetics, exerts cytoprotective effects and protects against the loss of mitochondrial DNA integrity in oxidatively stressed endothelial cells *in vitro*. *Nitric Oxide* **41**, 120-130 (2014).
4. Tomasova, L., Pavlovicova, M., Malekova, L., et al. Effects of AP39, a novel triphenylphosphonium derivatised anethole dithiolethione hydrogen sulfide donor, on rat haemodynamic parameters and chloride and calcium Cav3 and RyR2 channels. *Nitric Oxide* **46**, 131-144 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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