

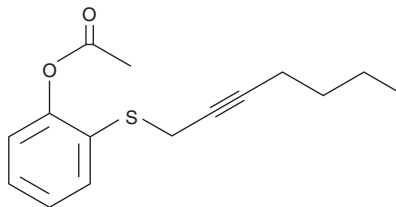
# PRODUCT INFORMATION



## APHS

Item No. 70330

**CAS Registry No.:** 209125-28-0  
**Formal Name:** 2-(2-heptynylthio)-phenol acetate  
**MF:** C<sub>15</sub>H<sub>18</sub>O<sub>2</sub>S  
**FW:** 262.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 249 nm  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥1 year



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

### Laboratory Procedures

APHS is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of APHS in these solvents is approximately 12.5, 11.1, and 14.3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of APHS is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of APHS in PBS, pH 7.2, is approximately 0.02 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

APHS is an O-acetyl, S-alkyl ether of 2-thio phenol and a selective, irreversible inhibitor of COX-2. APHS is a potent inhibitor of both COX-1 and COX-2, with IC<sub>50</sub> values of 17 and 0.8 μM for human recombinant COX-1 and COX-2, respectively.<sup>1</sup> APHS exhibits 20-fold selectivity toward the inhibition of COX-2, yet it is still more potent than aspirin in the inhibition of COX-1. APHS acetylates COX-1 at Ser<sup>530</sup> and COX-2 at Ser<sup>516</sup> resulting in irreversible enzyme inhibition.<sup>1</sup>

### Reference

1. Kalgutkar, A.S., Crews, B.C., Rowlinson, S.W., *et al.* Aspirin-like molecules that covalently inactivate cyclooxygenase-2. *Science* **280**, 1268-1270 (1998).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM