

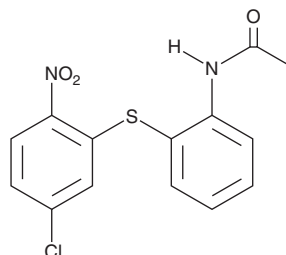
# PRODUCT INFORMATION



## 2-Acetamidophenyl 5-chloro-2-nitrophenyl sulfide

Item No. 18085

**CAS Registry No.:** 107522-19-0  
**Formal Name:** N-[2-[(5-chloro-2-nitrophenyl)thio]phenyl]-acetamide  
**Synonym:** 2'-(5-chloro-2-nitrophenylthio)-Acetanilide  
**MF:** C<sub>14</sub>H<sub>11</sub>ClN<sub>2</sub>O<sub>3</sub>S  
**FW:** 322.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 244, 363 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

2-Acetamidophenyl 5-chloro-2-nitrophenyl sulfide is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-acetamidophenyl 5-chloro-2-nitrophenyl sulfide in the solvent of choice, which should be purged with an inert gas. 2-Acetamidophenyl 5-chloro-2-nitrophenyl sulfide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 2-acetamidophenyl 5-chloro-2-nitrophenyl sulfide in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

2-Acetamidophenyl 5-chloro-2-nitrophenyl sulfide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-acetamidophenyl 5-chloro-2-nitrophenyl sulfide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 2-Acetamidophenyl 5-chloro-2-nitrophenyl sulfide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

2-Acetamidophenyl 5-chloro-2-nitrophenyl sulfide is a sulfide-like inhibitor of phosphodiesterase 7 (PDE7; IC<sub>50</sub> = 2.1 μM).<sup>1</sup> It is selective for PDE7A, producing only 10-11% inhibition of PDE3A, PDE4D, and PDE4B at 10 μM.<sup>1</sup> It also has no antioxidant activity or inhibitory activity against a panel of protein kinases.<sup>1</sup> Sulfide-like PDE7 inhibitors derived from 2-acetamidophenyl 5-chloro-2-nitrophenyl sulfide have cytoprotective and anti-inflammatory effects on SH-SY5Y neuroblastoma cells without action in a surrogate emesis mouse model.<sup>1</sup>

### Reference

1. Garcka, A.M., Brea, J., Morales-Garcia, J.A., *et al.* Modulation of cAMP-specific PDE without emetogenic activity: new sulfide-like PDE7 inhibitors. *J. Med. Chem.* **57**(20), 8590-8607 (2014).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/05/2025

#### 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](http://WWW.CAYMANCHEM.COM)