

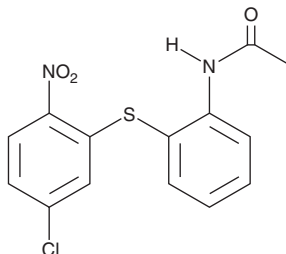
PRODUCT INFORMATION



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: C₁₄H₁₁ClN₂O₃S
FW: 322.8
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 244, 363 nm



Laboratory Procedures

For long term storage, we suggest that 2-acetamidophenyl 5-chloro-2-nitrophenyl sulfide be stored as supplied at -20°C. It should be stable for at least two years.

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. 2-Acetamidophenyl 5-chloro-2-nitrophenyl sulfide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. 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; IC₅₀ = 2.1 μM).¹ It is selective for PDE7A, producing only 10-11% inhibition of PDE3A, PDE4D, and PDE4B at 10 μM.¹ It also has no antioxidant activity or inhibitory activity against a panel of protein kinases.¹ 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.¹

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.

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