

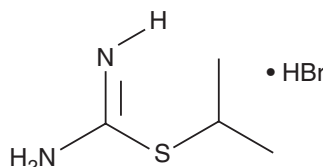
Product Information



S-isopropyl Isothiourea (hydrobromide)

Item No. 81290

CAS Registry No.: 81290
Formal Name: isopropyl carbamimidothioate, hydrobromide
Synonyms: IPTU; S-isopropyl ITU
MF: C₄H₁₀N₂S • HBr
FW: 199.1
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that S-isopropyl Isothiourea (hydrobromide) (IPTU (HBr)) be stored as supplied at -20°C. It should be stable for at least one year.

IPTU (HBr) is supplied as a crystalline solid. A stock solution may be made by dissolving the IPTU (HBr) in an organic solvent purged with an inert gas. IPTU (HBr) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of IPTU (HBr) in these solvents is approximately 100, 200, and 50 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. Organic solvent-free aqueous solutions of IPTU (HBr) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of IPTU (HBr) in PBS, pH 7.2, is approximately 30 mg/ml. We do not recommend storing the aqueous solution for more than one day.

IPTU is a potent inhibitor of NOS *in vitro* but may lack good *in vivo* efficacy due to poor cellular penetration. The K_i values are 9.8, 22, and 37 nM using purified human iNOS, eNOS, and nNOS, respectively.¹

References

1. Garvey, E.P., Oplinger, J.A., Tanoury, G.J., *et al.* Potent and selective inhibition of human nitric oxide synthases. Inhibition by non-amino isothioureas. *J. Biol. Chem.* **269**, 26669-26676 (1994).

Related Products

S-ethyl Isothiourea (hydrobromide) - Item No. 81275 • S-ethyl N-[4-(trifluoromethyl)phenyl] Isothiourea (hydrochloride) - Item No. 81280

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

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