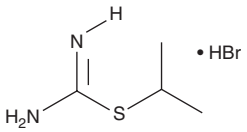
PRODUCT INFORMATION

S-isopropyl Isothiourea (hydrobromide)

Item No. 81290

CAS Registry No.: 4269-97-0
Formal Name: isopropyl carbamimidothioate, monohydrobromide
Synonyms: S-isopropyl ITU, IPTU
MF: $C_4H_{10}N_2S \bullet HBr$
FW: 199.1
Purity: ≥98%
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

S-isopropyl Isothiourea (hydrobromide) (IPTU (hydrobromide)) is supplied as a crystalline solid. A stock solution may be made by dissolving the IPTU (hydrobromide) in the solvent of choice, which should be purged with an inert gas. IPTU (hydrobromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of IPTU (hydrobromide) in these solvents is approximately 100, 50, and 20 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 (hydrobromide) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of IPTU (hydrobromide) in PBS (pH 7.2) is approximately 30 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

IPTU (hydrobromide) 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]

Reference

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 acid isothioureas. *J. Biol. Chem.* **269(43)**, 26669-26676 (1994).

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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