

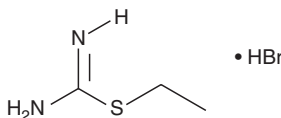
Product Information



S-ethyl Isothiourea (hydrobromide)

Item No. 81275

CAS Registry No.: 1071-37-0
Formal Name: ethyl carbamimidothioate, hydrobromide
Synonyms: Ethiron bromide; 2-Ethyl-2-thiopseudourea hydrobromide; SEIT (HBr); WR 539
MF: C₃H₈N₂S • HBr
FW: 185.1
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

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

SEIT (HBr) is supplied as a crystalline solid. A stock solution may be made by dissolving the SEIT (HBr) in an organic solvent purged with an inert gas. SEIT (HBr) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SEIT (HBr) in these solvents is approximately 30 mg/ml.

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 SEIT (HBr) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of SEIT (HBr) in PBS, (pH 7.2), is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

SEIT is a potent inhibitor of NOS *in vitro* but lacks good *in vivo* efficacy due to poor cellular penetration. The K_i values are 19, 39 and 29 nM using purified human iNOS, eNOS, and nNOS, respectively.¹⁻³

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 acid isothioureas. *J. Biol. Chem.* **269**, 26669-26676 (1994).
2. Nakane, M., Klinghofer, V., Kuk, J.E., *et al.* Novel potent and selective inhibitors of inducible nitric oxide synthase. *Mol. Pharmacol.* **47**, 831-834 (1995).
3. Southan, G.J., Szabó, C., and Thiemeermann, C. Isothioureas: Potent inhibitors of nitric oxide synthases with variable isoform selectivity. *Br. J. Pharmacol.* **114**, 510-516 (1995).

Related Product

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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