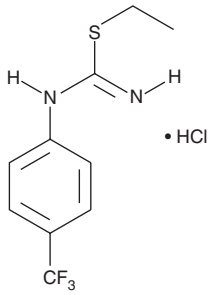
PRODUCT INFORMATION

S-ethyl N-[4-(trifluoromethyl)phenyl] Isothiourea (hydrochloride)

Item No. 81280

CAS Registry No.: 163490-78-6
Formal Name: N-[4-(trifluoromethyl)phenyl]-carbamimidothioic acid, ethyl ester, monohydrochloride
Synonym: EPIT
MF: $C_{10}H_{11}F_3N_2S \bullet HCl$
FW: 284.7
Purity: ≥98%
UV/Vis.: λ_{max}: 245 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

S-ethyl N-[4-(trifluoromethyl)phenyl] Isothiourea (EPIT) (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the EPIT (hydrochloride) in the solvent of choice, which should be purged with an inert gas. EPIT (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of EPIT (hydrochloride) in these solvents is approximately 55, 33, and 54 mg/ml, respectively.

EPIT (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, EPIT (hydrochloride) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. EPIT (hydrochloride) has a solubility of approximately 1 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

EPIT is a selective, competitive inhibitor of nNOS having a K_i of 0.32 µM for the purified human enzyme. EPIT exhibits 115-fold and 29-fold selectivity for nNOS compared to iNOS and eNOS, respectively. It exhibits reduced inhibitory potency in whole-cell assays, possibly due to reduced intracellular uptake.[1]

Reference

1. Shearer, B.G., Lee, S., Oplinger, J.A., *et al*. Substituted N-phenylisothioureas: Potent inhibitors of human nitric oxide synthase with neuronal isoform selectivity. *J. Med. Chem.* **40(12)**, 1901-1905 (1997).

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