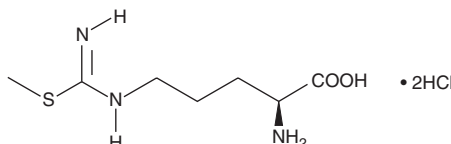


PRODUCT INFORMATION

S-methyl-L-Thiocitrulline (hydrochloride)

Item No. 80585

CAS Registry No.: 209589-59-3
Formal Name: N⁵-[imino(methylthio)methyl]-L-ornithine, dihydrochloride
Synonyms: SMTC, methyl-TC
MF: C₇H₁₅N₃O₂S • 2HCl
FW: 278.2
Purity: ≥97%
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-methyl-L-Thiocitrulline (methyl-TC) (hydrochloride) is supplied as a crystalline solid. methyl-TC (hydrochloride) is supplied as the hydrochloride salt to facilitate its uptake in aqueous solutions. A stock solution may be made by dissolving the methyl-TC (hydrochloride) in an organic solvent purged with an inert gas. methyl-TC (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of methyl-TC (hydrochloride) in these solvents is 75, 20, and 14 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. The solubility of methyl-TC (hydrochloride) in PBS (pH 7.2) is approximately 25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

methyl-TC is a potent NOS inhibitor with selectivity toward the neuronal isoform compared to eNOS and iNOS. For human enzymes, it exhibits K_i values of 1.2, 11, and 40 nM for nNOS, eNOS, and iNOS, respectively.^{1,2}

References

1. Narayanan, K., Spcak, L., McMillan, K., *et al.* S-Alkyl-L-thiocitrullines. Potent stereoselective inhibitors of nitric oxide synthase with strong pressor activity *in vivo*. *J. Biol. Chem.* **270**(19), 11103-11110 (1995).
2. Furfine, E.S., Harmon, M.F., Paith, J.E., *et al.* Potent and selective inhibition of human nitric oxide synthases. Selective inhibition of neuronal nitric oxide synthase by S-methyl-L-thiocitrulline and S-ethyl-L-thiocitrulline. *J. Biol. Chem.* **269**(43), 26677-26683 (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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