

Product Data Sheet

Product Name: 2-Thiocytidine

Cat. No.: GC49348

Chemical Properties

Cas. No. 13239-97-9

SMILES OC[C@H]1[C@@H](O)[C@@H](O)[C@@](N2C=CC(N)=NC2=S)([H])O1

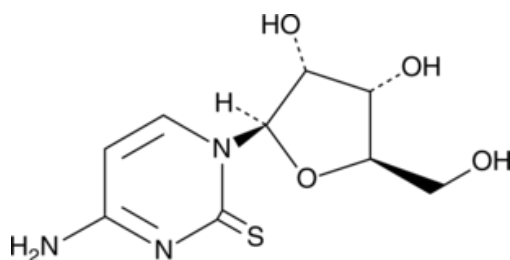
Formula C₉H₁₃N₃O₄S M.Wt 259.3

Solubility DMSO: 1 mg/ml, DMSO:PBS (pH 7.2) (1:6): 0.14 mg/ml, PBS (pH 7.2): slightly soluble
Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

2-Thiocytidine is a modified nucleobase found in bacterial and archaeal tRNA.^{1,2} 2-Thiocytidine is also an intermediate in the synthesis of pyrimidine β-ribonucleosides and β-ribonucleotides.³

1. Shigi, N. Biosynthesis and functions of sulfur modifications in tRNA. *Front. Genet.* 5:67 (2014).
2. ?avut, M., and Liu, Y. Biosynthesis of sulfur-containing tRNA modifications: A comparison of bacterial, archaeal, and eukaryotic pathways. *Biomolecules* 7(1):27 (2017).
3. Xu, J., Tsanakopoulou, M., Magnani, C.J., et al. A prebiotically plausible synthesis of pyrimidine β-ribonucleosides and their phosphate derivatives involving photoanomerization. *Nat. Chem.* 9(4):303-309 (2017).

Caution: Product has not been fully validated for medical applications. For research use only.

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