

Product Data Sheet

Product Name: Thiamine disulfide

Cat. No.: GC62063

Chemical Properties

Cas. No. 67-16-3

SMILES C/C(N(CC1=CN=C(C)N=C1N)C=O)=C(SS/C(CCO)=C(N(CC2=CN=C(C)N=C2N)C=O)\C)/CCO

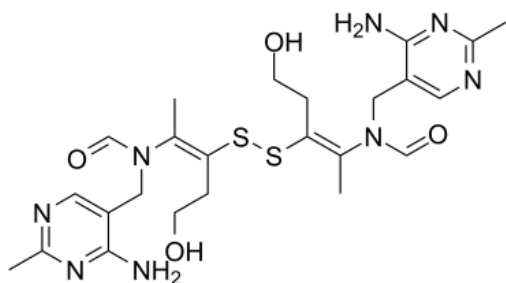
Formula $C_{24}H_{34}N_8O_4S_2$ M.Wt 562.71

Solubility DMSO : 250 mg/mL (444.28 mM) Storage 4°C, protect from light, stored under nitrogen

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

Thiamine disulfide, a vitamin B1 derivative, is an oxidized dimer of Thiamine. Thiamine disulfide is a potent HIV-1 inhibitor. Thiamine disulfide significantly depresses HIV-1 transactivator (Tat) activity[1]

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

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[2].

Thiamine disulfide markedly inhibits production of progeny HIV-1 in acute and chronic HIV-1-infected CEM at nontoxic concentrations of 500-1000 μ M. Thiamine disulfide (500 μ M) blocks 99.7% of HIV-1 production after 96 hours culture in acute HIV-1 (LAV-1) infection, whereas it inhibits 90-98% of HIV-1 production in chronic-infected cells (CEM/LAV-1, H9/MN, and Molt-4/IIIB)[1].

[1]. S Shoji, et al. Thiamine disulfide as a potent inhibitor of human immunodeficiency virus (type-1) production. Biochem Biophys Res Commun. 1994 Nov 30;205(1):967-75.

[2]. Y Komata, et al. In vitro percutaneous absorption of thiamine disulfide from a mixture of propylene glycol and fatty acid. J Pharm Sci. 1992 Aug;81(8):744-6.

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