2-Thiouracil

Cat. No.: HY-B0503

CAS No.: 141-90-2

Molecular Formula: $C_4H_4N_2OS$

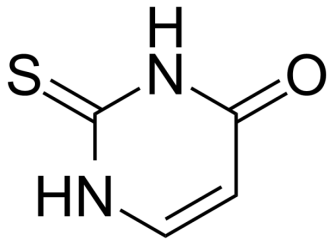
Molecular Weight: 128.15

Target: NO Synthase

Pathway: Immunology/Inflammation

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (390.17 mM; Need ultrasonic)

H_2O : 0.67 mg/mL (5.23 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	7.8034 mL	39.0168 mL	78.0336 mL
5 mM	1.5607 mL	7.8034 mL	15.6067 mL
10 mM	0.7803 mL	3.9017 mL	7.8034 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3.75 mg/mL (29.26 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.75 mg/mL (29.26 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Thiouracil (Thiouracil) is an antithyroid compound. 2-Thiouracil can function as a highly specific melanoma seeker. 2-Thiouracil is a selective inhibitor of neuronal nitric oxide synthase (nNOS) with a K_i of 20 μM[1][2].

IC_{50} & Target

Ki: 20 μM (nNOS)[1]

REFERENCES

[1]. Palumbo, A., et al. 2-thiouracil is a selective inhibitor of neuronal nitric oxide synthase antagonising tetrahydrobiopterin-dependent enzyme activation and dimerisation. FEBS Lett, 2000. 485(2-3): p. 109-12.

[2]. Napolitano, A., et al., Mechanism of selective incorporation of the melanoma seeker 2-thiouracil into growing melanin. J Med Chem, 1996. 39(26): p. 5192-201.

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