

Benzylthiouracil

Chemical Properties

CAS No. :	6336-50-1
Formula:	C ₁₁ H ₁₀ N ₂ O ₂ S
Molecular Weight:	218.275
Storage:	Store at low temperature, Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	Benzylthiouracil (6-Benzyl-2-thiouracil) induces ANCA-associated glomerulonephritis in Graves' disease patients and is used to study hyperthyroidism.
Targets(IC50)	Others, TSH Receptor
In vivo	In rats, Benzylthiouracil was observed to be ten times more potent than thiouracil and methylthiouracil in inhibiting the thyroid's ability to naturally collect iodine, but there was no significant difference in the duration of inhibition at the smallest effective dose. [1]

Solubility Information

Solubility	DMSO: 180.00 mg/mL (824.65 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.5813 mL	22.9064 mL	45.8127 mL
5 mM	0.9163 mL	4.5813 mL	9.1625 mL
10 mM	0.4581 mL	2.2906 mL	4.5813 mL
50 mM	0.0916 mL	0.4581 mL	0.9163 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Rietveld IB, et al. Polymorphism of benzylthiouracil, an active pharmaceutical ingredient against hyperthyroidism. *Int J Pharm.* 2021 Apr 1;598:120378.

Chebbi W, et al. Vasculite cutanée à anticorps anti-cytoplasme des polynucléaires neutrophiles induite par le benzylthio-uracile : à propos d'un cas et revue de la littérature [Benzylthiouracil-induced antineutrophil cytoplasmic antibody-associated cutaneous vasculitis: a case report and literature review]. *Rev Med Interne.* 2013 Sep;34(9):561-4. French.

Bugnon C, et al. Etude cyto-immunologique des cellules C avec des immunosérums anti-calcitonine ou anti-somatostatine chez des rats traités par la vitamine D, la thyroxine ou le benzyl-thiouracile [Immunocytological studies of C cells with anti-calcitonin or antisomatostatin immunoserums in rats treated with vitamin D, thyroxine or benzyl-thiouracil]. *C R Seances Soc Biol Fil.* 1978;172(4):691-6. French.

RAWSON RW, et al. The effect of certain goitrogenic drugs on the absorption of radioactive iodine by the thyroid gland of rats and chicks; collection of radioiodine by thyroids made goitrous following chronic administration of these agents. *J Pharmacol Exp Ther.* 1948 Jun;93(2):240-5.

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