

Propylthiouracil

Catalog No: tcsc2390



Available Sizes

Size: 100mg

Size: 500mg



Specifications

CAS No:

51-52-5

Formula:

$C_7H_{10}N_2OS$

Pathway:

Others

Target:

Others

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 100 mg/mL (587.44 mM)

Alternative Names:

6-n-Propylthiouracil;6-Propyl-2-thiouracil;PTU

Observed Molecular Weight:

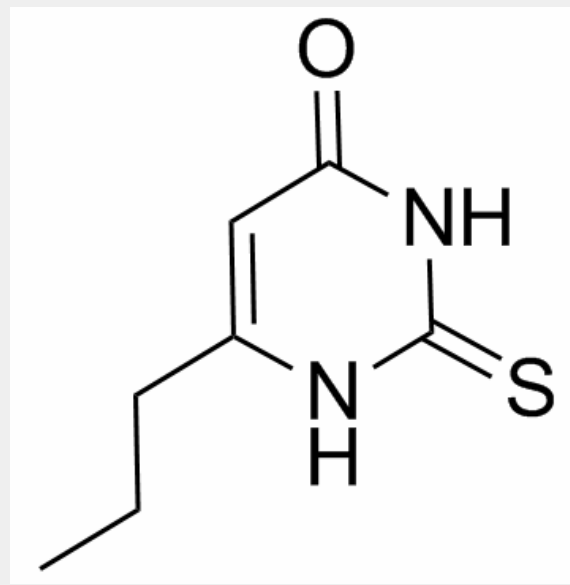
170.23

Product Description

Propylthiouracil(6-Propyl-2-thiouracil) is a thyroperoxidase and 5\'-deiodinase inhibitor.

Target: Thyroperoxidase (TPO)

Propylthiouracil (PTU) is a thiouracil-derived drug used to treat hyperthyroidism (including Graves\' disease) by decreasing the amount of thyroid hormone produced by the thyroid gland [1]. The antithyroid drug 6-propylthiouracil (PTU) was shown to have an unexpectedly prolonged inhibitory effect on iodination in the thyroid glands of rats. Eighteen hours after injection of a relatively small dose, iodination in the thyroid remained inhibited by more than 90% [2]. PTU inhibits the enzyme thyroperoxidase, which normally acts in thyroid hormone synthesis by oxidizing the anion iodide (I⁻) to iodine (I₀), facilitating iodine\'s addition to tyrosine residues on the hormone precursor thyroglobulin. This is one of the essential steps in the formation of thyroxine (T₄). PTU does not inhibit the action of the sodium-dependent iodide transporter located on follicular cells\' basolateral membranes. Inhibition of this step requires competitive inhibitors, such as perchlorate and thiocyanate. From Wikipedia.



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