

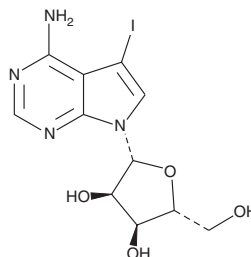
# PRODUCT INFORMATION



## 5-Iodotubercidin

Item No. 10010375

**CAS Registry No.:** 24386-93-4  
**Formal Name:** 5-iodo-7-b-D-ribofuranosyl-7H-pyrrolo[2,3-d]pyrimidin-4-amine  
**Synonyms:** Itu, NSC 113939  
**MF:** C<sub>11</sub>H<sub>13</sub>IN<sub>4</sub>O<sub>4</sub>  
**FW:** 392.2  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 207, 284 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

5-Iodotubercidin (Itu) is supplied as a solid. A stock solution may be made by dissolving the Itu in the solvent of choice, which should be purged with an inert gas. Itu is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml.

### Description

5-Iodotubercidin is an inhibitor of adenosine kinase (IC<sub>50</sub> = 0.026 μM).<sup>1</sup> It inhibits protein kinase A (PKA), phosphorylase kinase, casein kinase 1 (CK1), CK2, and PKC (IC<sub>50</sub>s = 5-10, 5-10, 0.4, 10.9, and 0.4 μM, respectively).<sup>2</sup> 5-Iodotubercidin is also an inhibitor of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA-dependent RNA polymerase (RdRp; EC<sub>50</sub> = 0.75 μM).<sup>3</sup> It decreases fatty acid synthesis and increases fatty acid oxidation in isolated rat hepatocytes when used at a concentration of 20 μM.<sup>4</sup> *In vivo*, 5-iodotubercidin reduces the number of seizures in a rat model of seizures induced by maximum electroshock (MES; ED<sub>50</sub> = 6 mg/kg).<sup>1</sup>

### References

1. Ugarkar, B.G., DaRe, J.M., Kopcho, J.J., *et al.* Adenosine kinase inhibitors. 1. Synthesis, enzyme inhibition, and antiseizure activity of 5-iodotubercidin analogues. *J. Med. Chem.* **43**(15), 2883-2893 (2000).
2. Massillon, D., Stalmans, W., van de Werve, G., *et al.* Identification of the glycogenic compound 5-iodotubercidin as a general protein kinase inhibitor. *Biochem J.* **299**, 123-128 (1994).
3. Zhao, J., Liu, Q., Yi, D., *et al.* 5-Iodotubercidin inhibits SARS-CoV-2 RNA synthesis. *Antiviral Res.* **198**, 105254 (2022).
4. García-Villafranca, J. and Castro, J. Effects of 5-iodotubercidin on hepatic fatty acid metabolism mediated by the inhibition of acetyl-CoA carboxylase. *Biochem. Pharmacol.* **63**, 1997-2000 (2002).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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