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- Expressversand

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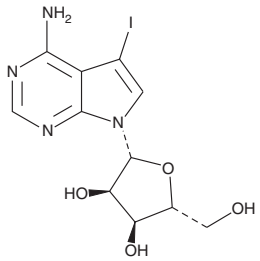
PRODUCT INFORMATION

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:	$C_{11}H_{13}IN_4O_4$
FW:	392.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 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_{50} = 0.026 µM).[1] It inhibits protein kinase A (PKA), phosphorylase kinase, casein kinase 1 (CK1), CK2, and PKC (IC_{50}s = 5-10, 5-10, 0.4, 10.9, and 0.4 µM, respectively).[2] 5-Iodotubercidin is also an inhibitor of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) RNA-dependent RNA polymerase (RdRp; EC_{50} = 0.75 µM).[3] It decreases fatty acid synthesis and increases fatty acid oxidation in isolated rat hepatocytes when used at a concentration of 20 µM.[4] *In vivo*, 5-iodotubercidin reduces the number of seizures in a rat model of seizures induced by maximum electroshock (MES; ED_{50} = 6 mg/kg).[1]

References

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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).

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