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## Product Data Sheet

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Product Name: Tipiracil  
 Cat. No.: GC37798

### Chemical Properties

Cas. No. 183204-74-2

SMILES O=C1NC(C(Cl)=C(CN2C(CCC2)=N)N1)=O

Formula C9H11ClN4O2 M.Wt 242.66

Solubility Water: 1 mg/mL (4.12 mM); DMSO: < 1 mg/mL (insoluble or slightly soluble) Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

Tipiracil (TPI) is a potent and competitive inhibitor of thymidine phosphorylase (TPase) with an IC<sub>50</sub> value of 35 nM for human placental TPase.<sup>1</sup> It is selective for TPase over other pyrimidine-metabolizing enzymes (IC<sub>50</sub>s = >1 mM for UPase, OPRTase, TK, and DPDase). TPI inhibits the phosphorolysis and degradation of trifluorothymidine, a cytotoxic nucleoside, in human breast and colon carcinoma tumor samples. Oral administration of TPI (12.5-50 mg/kg) enhances the anti-tumor activity of trifluorothymidine in a mouse AZ-521 stomach cancer xenograft model. Formulations containing TPI have been used for the treatment of metastatic colorectal cancer.<sup>2</sup>

1. Fukushima, M., Suzuki, N., Emura, T., et al. Structure and activity of specific inhibitors of thymidine phosphorylase to potentiate the function of antitumor 2'-deoxyribonucleosides. *Biochem. Pharmacol.* 59(10):1227-1236 (2000)  
 2. Trebst, A., Wietoska, H., Draber, W., et al. The inhibition of photosynthetic electron flow in chloroplasts by the dinitrophenylether of bromo- or iodo-nitrothymol. *Z. Naturforsch. C J. Biosci.* 33(11-12):919-927 (1978)

**Caution: Product has not been fully validated for medical applications. For research use only.**

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