

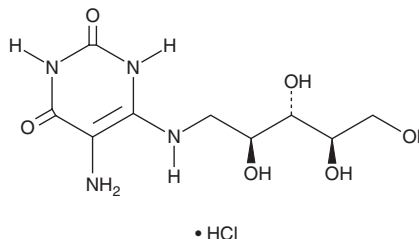
PRODUCT INFORMATION



5-Amino-6-(D-ribitylamino)uracil (hydrochloride)

Item No. 39898

CAS Registry No.: 134452-11-2
Formal Name: 1-[(5-amino-1,2,3,6-tetrahydro-2,6-dioxo-4-pyrimidinyl)amino]-1-deoxy-D-ribitol, monohydrochloride
Synonyms: 5-Amino-6-ribitylamino-2,4(1H,3H)-Pyrimidinedione, 5-Amino-ribityl-Uracil, 5-A-RU
MF: $C_9H_{16}N_4O_6 \cdot HCl$
FW: 312.7
Purity: $\geq 95\%$
Supplied as: A solid
Storage: $-80^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

5-Amino-6-(D-ribitylamino)uracil (5-A-RU) is supplied as a solid. A stock solution may be made by dissolving the 5-A-RU in the solvent of choice, which should be purged with an inert gas. 5-A-RU is slightly soluble in organic solvents such as acetonitrile. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

5-A-RU is a derivative of uracil (Item No. 26088) and a precursor to riboflavin.^{1,2} It reacts non-enzymatically with dihydroxy acetone, methylglyoxal, or glyoxal to activate mucosal-associated invariant T (MAIT) cells isolated from iVa19-Tg and iVa19Vβ6-DTg mice.² 5-A-RU (100 nmol/animal, i.p.), when administered in combination with methylglyoxal, activates MAIT cells in iVa19 $Ca^{+/-}$ -Tg mice. It is also a substrate for F_0 synthase, an enzyme involved in the biosynthesis of the energy metabolism cofactor F_{420} in archaea, bacteria, and eukaryotes.¹

References

1. Decamps, L., Philmus, B., Benjdia, A., *et al.* Biosynthesis of F_0 , precursor of the F_{420} cofactor, requires a unique two radical-SAM domain enzyme and tyrosine as substrate. *J. Am. Chem. Soc.* **134**(44), 18173-18176 (2012).
2. Soudais, C., Samassa, F., Sarkis, M., *et al.* In vitro and in vivo analysis of the gram-negative bacteria-derived riboflavin precursor derivatives activating mouse MAIT cells. *J. Immunol.* **194**(10), 4641-4649 (2015).

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.

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