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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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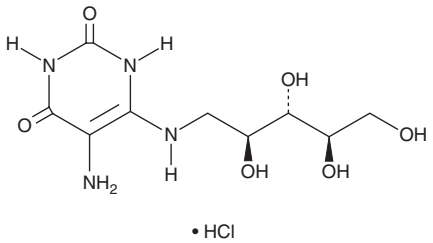
PRODUCT INFORMATION

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: $C_9H_{16}N_4O_6$ • HCl
FW: 312.7
Purity: ≥95%
Supplied as: A solid
Storage: -80°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 iVα19-Tg and iVα19Vβ6-DTg mice.[2] 5-A-RU (100 nmol/animal, i.p.), when administered in combination with methylglyoxal, activates MAIT cells in iVα19 $C\alpha^{-/-}$-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).

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