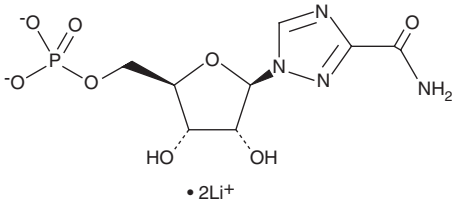
PRODUCT INFORMATION

Ribavirin 5'-monophosphate (lithium salt)

Item No. 21821

CAS Registry No.:	66983-94-6
Formal Name:	1-(5-O-phosphono-β-D-ribofuranosyl)-1H-1,2,4-triazole-3-carboxamide, dilithium salt
MF:	$C_8H_{11}N_4O_8P \bullet 2Li$
FW:	336.1
Purity:	≥95%
UV/Vis.:	λ_{max}: 205 nm
Supplied as:	A crystalline 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

Ribavirin 5'-monophosphate (lithium salt) is supplied as a crystalline solid. Aqueous solutions of ribavirin 5'-monophosphate (lithium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ribavirin 5'-monophosphate (lithium salt) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ribavirin 5'-monophosphate inhibits viral DNA and RNA replication *in vitro via* the strong competitive inhibition of inosine monophosphate dehydrogenase (IMPDH), with a reported K_i value of 270 nM, and thus inhibits guanosine triphosphate synthesis.[1-3] This agent, a metabolite of the prodrug ribavirin (Item No. 16757), exhibits broad-spectrum antiviral activity, particularly against myxoviruses.[2,3] The antiviral effects of ribavirin require conversion to the monophosphate form *via* adenosine kinase.[1,3] The anti-HIV activity of ribavirin in cultured human lymphocytes, as well as the anti-influenza activity of this prodrug in MDCK cells, have been attributed to ribavirin 5'-monophosphate.[4,5]

References

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3. De Clercq, E. Specific targets for antiviral drugs. *Biochem. J.* **205**, 1-13 (1982).
4. Balzarini, J., Lee, C.K., Herdewijn, P., *et al.* Mechanism of the potentiating effect of ribavirin on the activity of 2',3'-dideoxyinosine against human immunodeficiency virus. *J. Biol. Chem.* **266(32)**, 21509-21514 (1991).
5. Browne, M.J. Mechanism and specificity of action of ribavirin. *Antimicrob. Agents Chemother.* **15(6)**, 747-753 (1979).

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