

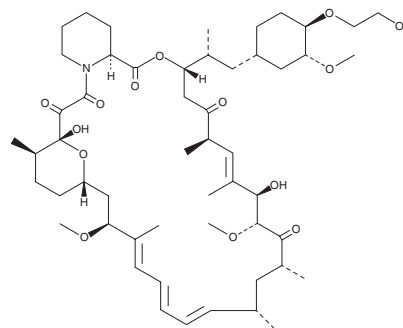
PRODUCT INFORMATION



Everolimus

Item No. 11597

CAS Registry No.: 159351-69-6
Formal Name: 42-O-(2-hydroxyethyl)-rapamycin
Synonym: RAD001
MF: C₅₃H₈₃NO₁₄
FW: 958.2
Purity: ≥95%
UV/Vis.: λ_{max}: 268, 277, 289 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

Everolimus is supplied as a crystalline solid. A stock solution may be made by dissolving the everolimus in the solvent of choice, which should be purged with an inert gas. Everolimus is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of everolimus in ethanol and DMSO is approximately 10 mg/ml and approximately 20 mg/ml in DMF.

Everolimus is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, everolimus should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Everolimus has a solubility of approximately 0.1 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The mammalian target of rapamycin (mTOR) is a serine/threonine kinase that, as part of two distinct complexes (mTORC1 and mTORC2), plays pivotal roles in intracellular signaling.¹⁻³ Everolimus is a hydroxyethyl ether rapamycin (Item No. 13346) derivative that inhibits mTOR signaling through both mTORC1 and mTORC2 when added to cells at 20 nM.^{4,5} It is orally available and shows improved pharmacokinetics and pharmacodynamics over rapamycin.⁵ Through its inhibition of mTOR, everolimus inhibits cell proliferation, metabolism, and angiogenesis in certain types of cancer.^{5,6} It also acts as an immunosuppressive agent in the context of organ transplantation.^{5,7}

References

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4. Zeng, Z., Sarbassov, D.D., Samudio, I.J., et al. *Blood* **109**(8), 3509-3512 (2007).
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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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