

Everolimus

mTOR Inhibitor

Catalog # tlr1-eve

For research use only

Version # 15K02-MM

PRODUCT INFORMATION

Content:

- 5 mg Everolimus

Storage and stability:

- Everolimus is provided as a translucent film and shipped at room temperature. Store at -20 °C. Solid product is stable for 2 years when properly stored.
- Upon resuspension in DMSO, prepare aliquots of everolimus and store at -20 °C or -80 °C. Avoid repeated freeze-thaw cycles. Resuspended product is stable for 3 months at -20 °C and for 6 months at -80 °C.

Quality control:

- Purity: ≥98% (UHPLC)
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

CHEMICAL PROPERTIES

Synonym: RAD001

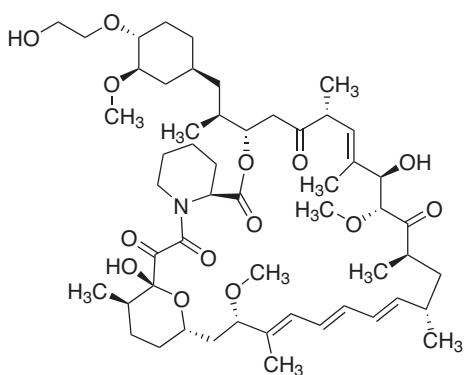
CAS number: 159351-69-6

Formula: C₅₃H₈₃NO₁₄

Molecular weight: 958.22

Solubility: 10 mg/ml in DMSO

Structure:



DESCRIPTION

Everolimus (RAD001), a derivative of rapamycin, is an inhibitor of mTOR. mTOR is a key downstream protein kinase of PI3K/Akt signaling pathway, and plays a central role in controlling cancer cell growth. Everolimus is currently used as an immunosuppressant to prevent the rejection of organ transplants and for the treatment of certain types of cancer¹. It has been demonstrated that in cancer models that everolimus promotes autophagy through the inhibition of mTOR².

1. **Chiong E. et al., 2011.** Effects of mTOR inhibitor everolimus (RAD001) on bladder cancer cells. *Clin Cancer Res.* 17(9):2863-73.
2. **Crazzolara R. et al., 2009.** Everolimus induces autophagy in acute lymphoblastic leukemia. *Autophagy.* 5(5):727-8.
3. **Yunokawa M. et al., 2012.** Efficacy of everolimus, a novel mTOR inhibitor, against basal-like triple-negative breast cancer cells. *Cancer Sci.* 103(9):1665-71.

METHODS

Preparation of everolimus stock solution (10 mM)

1. Add 522 µl DMSO to 5 mg everolimus.
2. Vortex until complete solubilization.
3. Prepare aliquots and store stock solution at -20 °C or -80 °C.
4. Further dilutions can be prepared using aqueous buffers. We do not recommend storing the aqueous solution for more than one day.

Working concentration: 1 - 300 nM for cell culture assays

PROTOCOLS (For reference only)

Cell Culture Assay³

Cells: Triple-negative breast cancers (TNBCs)

Working concentration: 1 - 300 µM

Incubation time: 12 h

Method: Cell proliferation assays

RELATED PRODUCTS

Product	Catalog Code
Perifosine (Akt inhibitor)	tlrl-peri
Rapamycin (mTOR inhibitor)	tlrl-rap
SB203580 (p38 MAP kinase & Akt inhibitor)	tlrl-sb20

TECHNICAL SUPPORT

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