

Product Name	: Temsirolimus
Synonyms	: CCI-779; CCI779; Torisel
Cat No.	: M12404
CAS Number	: 162635-04-3
Molecular Formula	: C ₅₆ H ₈₇ N ₃ O ₁₆
Formula Weight	: 1030.29
Chemical Name	: 40-[3-Hydroxy-2-(hydroxymethyl)-2-methylpropanoate]-rapamycin
Description	: A rapamycin ester and mTOR inhibitor with biochemical IC ₅₀ of 1.74 μM; reduces global protein synthesis and disassembly of polyribosomes, increases the phosphorylation of eEF2 and the translation initiation factor eIF2 alpha, inhibits mTOR signaling through an FKBP12-independent mechanism in cancer cells; reduces neoplasia and normalizes p70/S6 kinase activity in Pten ^{+/−} mice, with no effect on Akt.
Pathway	: PI3K/Akt/mTOR signaling
Target	: mTOR
Receptor	: mTOR
Solubility	: DMSO: 62 mg/mL (60.2 mM); Ethanol: 70 mg/mL (67.9 mM); Water: <1 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)
SMILES	: <chem>O=C(O[C@H]1[C@H](OC)C[C@H](C[C@H]([C@@H](OC([C@@](CCCC2)([H])N2C(C([C@@]3(O)[C@H](C)CC[C@@](O3)([H])C[C@H](OC)C(C)=C/C=C/C=C/C[C@H](C)C[C@@H](C)C[C@H](OC)[C@H](O)/C(C)=C/[C@H]4C=O)=O)=O)=O)CC4=O)C)CC1)C(C)(CO)CO</chem>
Storage	: (-20°C)
Stability	: ≥ 2 years
Reference	:

1. Georger B, et al. Cancer Res. 2001 Feb 15;61(4):1527-32. | 2. Dudkin L, et al. Clin Cancer Res. 2001 Jun;7(6):1758-64. | 3. Podsypanina K, et al. Proc Natl Acad Sci U S A. 2001 Aug 28;98(18):10320-5. | 4. Shor B, et al. Cancer Res. 2008 Apr 15;68(8):2934-43.