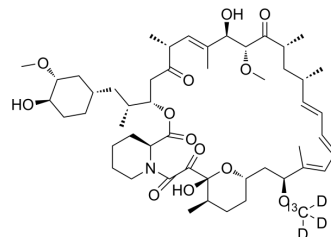


Rapamycin-¹³C,₃D₃

Cat. No.:	HY-10219S1
Molecular Formula:	C ₅₀ ¹³ CH ₇₆ D ₃ NO ₁₃
Molecular Weight:	918.18
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Rapamycin- ¹³ C, ₃ D ₃ (Sirolimus- ¹³ C, ₃ D ₃ ; AY-22989- ¹³ C, ₃ D ₃) is the ¹³ C and deuterium labeled Rapamycin (HY-10219) ^[1] . Rapamycin (Sirolimus; AY 22989) is a potent and specific mTOR inhibitor with an IC ₅₀ of 0.1 nM in HEK293 cells. Rapamycin binds to FKBP12 and specifically acts as an allosteric inhibitor of mTORC1 ^[2] . Rapamycin is an autophagy activator, an immunosuppressant ^[3] .
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-216.

Caution: Product has not been fully validated for medical applications. For research use only.

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