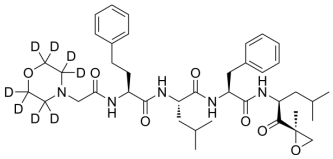
Carfilzomib-d_8

Cat. No.:	HY-10455S
CAS No.:	1537187-53-3
Molecular Formula:	$C_{40}H_{49}D_8N_5O_7$
Molecular Weight:	727.96
Target:	Proteasome; Apoptosis; Autophagy; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Apoptosis; Autophagy; Others
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Carfilzomib-d_8 is deuterium labeled Carfilzomib. Carfilzomib (PR-171) is an irreversible proteasome inhibitor with an IC50 of 5 nM in ANBL-6 and RPMI 8226 cells.
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]. Dasmahapatra G, et al. Carfilzomib interacts synergistically with histone deacetylase inhibitors in mantle cell lymphoma cells in vitro and in vivo. Mol Cancer Ther. 2011 Sep;10(9):1686-97.

[2]. Kuhn DJ, et al. Potent activity of carfilzomib, a novel, irreversible inhibitor of the ubiquitin-proteasome pathway, against preclinical models of multiple myeloma. Blood. 2007 Nov 1;110(9):3281-90.

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

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

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