

# Carfilzomib

**Catalog No: tcsc0984** 

**Available Sizes** Size: 5mg Size: 10mg Size: 50mg Size: 100mg Size: 200mg Size: 500mg **Size:** 1g Size: 2g Size: 5g **Specifications** 

CAS No:

868540-17-4

#### Formula:

 $C_{40}H_{57}N_5O_7$ 

Pathway: Metabolic Enzyme/Protease;Autophagy

#### **Target:**

Proteasome;Autophagy

### Purity / Grade:

>98%

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#### Solubility:

DMSO : 50 mg/mL (69.45 mM; Need ultrasonic); H2O :

#### **Alternative Names:**

PR-171

#### **Observed Molecular Weight:**

719.91

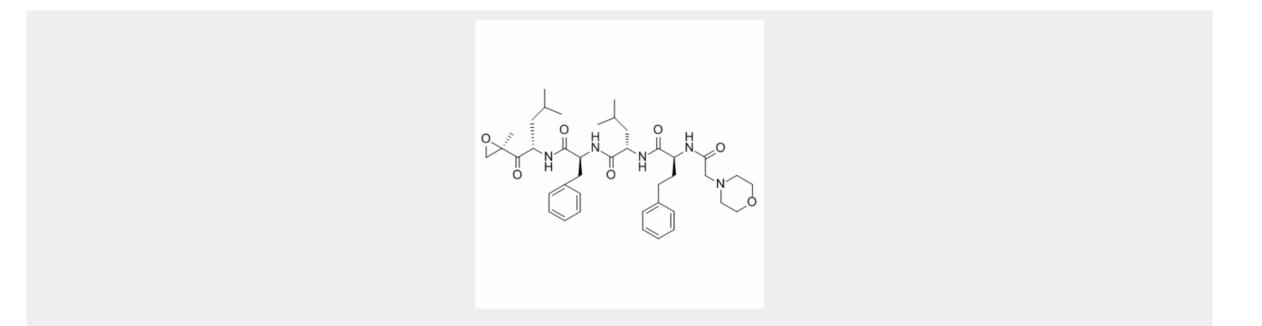
## **Product Description**

Carfilzomib is an irreversible **proteasome** inhibitor with **IC**<sub>50</sub> of

IC50 & Target: IC50: 5 nM (Proteasome)

In Vitro: Carfilzomib displays preferential in vitro inhibitory potency against the ChT-L activity in the  $\beta$ 5 subunit, with over 80% inhibition at doses of 10 nM and above and little or no effect on the PGPH and T-L activities at doses up to 100 nM. Carfilzomib decreases the viability of ANBL-6, RPMI 8226 cells, U266 and KAS-6/1 cells with an IC<sub>50</sub> less than 5 nM. Carfilzomib overcome Dex resistance, in that MM1.R cells reveals an IC<sub>50</sub> of 15.2 nM, less than the value of 29.3 nM for parental MM1.S cells<sup>[1]</sup>. Co-treatment with carfilzomib and HDACIs leads to synergistic induction of cell death in various mantle cell lymphoma lines and primary mantle cell lymphoma cells. Combined treatment with carfilzomib or ONX0912 with vorinostat in HF-4B and Granta cells sharply increases caspase activation, PARP cleavage, JNK activation, MnSOD2 induction, and DNA damage<sup>[2]</sup>.

*In Vivo:* Carfilzomib (2.0 mg/kg, i.v.) in conbination with 70 mg/kg vorinostat virtually abrogates tumor growth in Granta-luciferace cell xenograft flank model. Combined treatment results in a pronounced reduction in bioluminescence compared to animals treated with single agents or controls with minimal toxicity<sup>[2]</sup>.



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