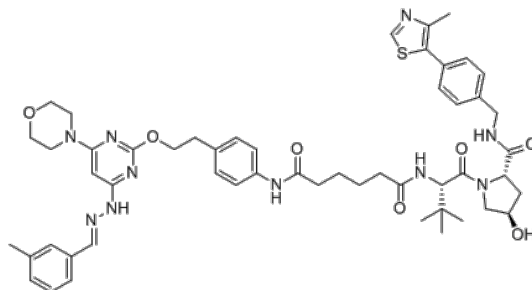


**Product Name** : PIK5-12d  
**Cat. No.** : PC-21468  
**CAS No.** :  
**Molecular Formula** : C<sub>52</sub>H<sub>64</sub>N<sub>10</sub>O<sub>7</sub>S  
**Molecular Weight** : 973.21  
**Target** : PROTAC  
**Solubility** : 10 mM in DMSO



## Biological Activity

PIK5-12d is a highly potent, selective, first-in-class PIKfyve PROTAC degrader, potently degrades PIKfyve protein with DC50 value of 1.48 nM and Dmax value of 97.7% in prostate cancer VCaP cells.

PIK5-12d (100 nM) causes fast degradation of PIKfyve protein with a t<sub>1/2</sub> value of 1.5 h in VCaP cells, also effectively reduces PIKfyve in other prostate cancer PC3, LNCaP, and 22RV1 cells.

PIK5-12d is a highly specific PIKfyve degrader with only 3 proteins significantly downregulated including PIKfyve, which accounts for the off-target rate at 2 out of 7573 detectable proteins.

PIK5-12d is selective for PIKfyve over other lipid kinases.

PIK5-12d mediated-PIKfyve degradation is VHL and proteasome-dependent.

PIK5-12d induces massive cytoplasmic vacuolization and blocks autophagy in prostate cancer cells.

PIK5-12d inhibits VCaP cell proliferation with an IC<sub>50</sub> of 522.3 nM, exerts prolonged suppression of PIKfyve downstream signaling.

PIK5-12d (10 mg/kg) almost completely depleted PIKfyve protein in LTL-331R human prostate cancer patient-derived xenograft (PDX) model, significantly suppressed tumor proliferation in vivo.

## References

Chungen Li, et al. J Med Chem. 2023 Sep 14;66(17):12432-12445.

**Caution: Product has not been fully validated for medical applications. Lab Use Only!**

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