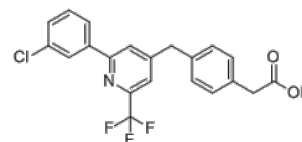


**Product Name** : BPN14770  
**Cat. No.** : PC-35904  
**CAS No.** : 1606974-33-7  
**Molecular Formula** : C<sub>21</sub>H<sub>15</sub>ClF<sub>3</sub>NO<sub>2</sub>  
**Molecular Weight** : 405.801  
**Target** : Phosphodiesterase (PDE)  
**Solubility** : 10 mM in DMSO



### Biological Activity

Zatolmilast (BPN14770) is an allosteric inhibitor of phosphodiesterase 4D (**PDE4D**) with IC<sub>50</sub> of 7.8 and 7.4 nM for human PDE4D7 and PDE4D3 respectively.

Zatolmilast (BPN14770) displays 16-fold less potent against monomeric form of PDE4D lacking the UCR1 dimerization domain (PDE4D2 IC<sub>50</sub> = 127 nM).

BPN14770 is 17-fold less potent against mouse PDE4D7 (IC<sub>50</sub> = 133 nM), binds to a primate-specific, N-terminal region of PDE4D.

BPN14770 elevates brain cAMP and facilitates hippocampal long-term potentiation (LTP) in wild-type and humanized PDE4D mice, improves cognitive performance, antagonized the amnesic effects of scopolamine and increased cAMP signaling in brain, and increased BDNF and markers of neuronal plasticity associated with memory.

### References

Zhang C, et al. *Neuropsychopharmacology*. 2018 Oct;43(11):2299-2309.

Gurney ME, et al. *Handb Exp Pharmacol*. 2011;(204):167-92.

Gurney ME, et al. *Sci Rep*. 2017 Nov 7;7(1):14653.

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

E-mail: tech@probechem.com