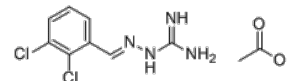


**Product Name** : Raphin1 acetate  
**Cat. No.** : PC-21976  
**CAS No.** : 2242616-04-0  
**Molecular Formula** : C<sub>10</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>4</sub>O<sub>2</sub>  
**Molecular Weight** : 291.13  
**Target** : Protein Phosphatase/PTP  
**Solubility** : 10 mM in DMSO



## Biological Activity

Raphin1 acetate (PPP1R15B inhibitor Raphin1) is a potent, selective, BBB-penetrant, orally bioavailable inhibitor of regulatory subunit of protein phosphatase 1, PPP1R15B, binds to the R15B-PP1c holophosphatase with K<sub>d</sub> of 33 nM, 30-fold selective in binding R15B-PP1c over R15A-PP1c and does not bind to PP1c.

Raphin1 at 10 uM selectively inhibits R15B, but not R15A, in cells in the holophosphatase SPR assay, inducing a transient increase of eIF2a phosphorylation and attenuation of protein synthesis.

Raphin1 inhibits dephosphorylation of eIF2a by R15B-PP1c, but not by R15APP1c, promotes proteasome- and p97-dependent degradation of R15B.

Raphin1 demonstrates efficacy in a mouse model of Huntington's disease in vivo.

## References

Krzyzosiak A, et al. Cell. 2018 Aug 23;174(5):1216-1228.e19.

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

E-mail: tech@probechem.com