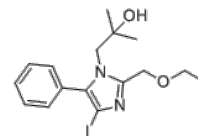


**Product Name** : CU-CPD107  
**Cat. No.** : PC-72053  
**CAS No.** : 2573912-32-8  
**Molecular Formula** : C<sub>16</sub>H<sub>21</sub>IN<sub>2</sub>O<sub>2</sub>  
**Molecular Weight** : 400.26  
**Target** : Toll-like Receptor (TLR)  
**Solubility** : 10 mM in DMSO



## Biological Activity

CU-CPD107 is a **TLR8**-specific small molecule with unique synergistic agonist activities in the presence of ssRNA, but inactive without the aid of ssRNA.

CU-CPD107 significantly inhibited of R848-induced signaling in HEK-Blue hTLR8 cells with an IC<sub>50</sub> of 13.7 μM.

CU-CPD107 only inhibited synthesized small-molecule agonist-induced TLR8 signaling without affecting other TLRs.

CU-CPD107 synergistically increased IFN-β, TNF-α, IL-1β, IL-6, and IL-8 mRNA expression levels in the presence of 5 μg/ml ssRNA40 in HEK-Blue hTLR8 cells, whereas CU-CPD107 alone did not. CU-CPD107 only activated TLR8-mediated signaling in the presence of ssRNA.

CU-CPD107 showed no pure agonistic activity, addressing a major challenge that has existed for previous TLR7 and TLR8 agonists as vaccine adjuvants or antiviral drugs.

## References

Yi Yang, et al. *Nat Commun.* 2021 Jul 16;12(1):4351.

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

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