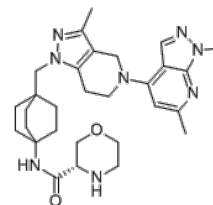


**Product Name** : MHV370  
**Cat. No.** : PC-20815  
**CAS No.** : 2205095-75-4  
**Molecular Formula** : C<sub>29</sub>H<sub>40</sub>N<sub>8</sub>O<sub>2</sub>  
**Molecular Weight** : 532.69  
**Target** : Toll-like Receptor (TLR)  
**Solubility** : 10 mM in DMSO



CAS: 2205095-75-4

## Biological Activity

MHV370 (MHV-370) is a potent, selective, orally bioavailable inhibitor of Toll-like receptors 7 and 8 (**TLR7/8**) with IC<sub>50</sub> of 1.1 and 4.5 nM in cell-based assays.

MHV370 potently inhibited CL307- and R848-driven reporter gene activity in cells with IC<sub>50</sub> of 15 nM and 7 nM, respectively.

MHV370 displayed no activity against other TLRs (TLR1/2, TLR2/6), tumor necrosis factor (TNF) receptor, and NOD1 at 10 μM.

MHV370 did not lead to cell toxicity at 10 μM, did not block ODN2216/TLR9-dependent IFN-α secretion from isolated human pDCs.

MHV370 potently suppressed production of multiple cytokines following activation of isolated monocytes with the TLR8-specific agonist TL8-0506, i.e., TNF, interleukin-6 (IL-6), and IL-1β.

MHV370 inhibited ssRNA-induced IFN-α and TNF responses on PBMCs with IC<sub>50</sub> of 4.1 and 70 nM, respectively.

MHV370 is a potent, selective, and reversible antagonist of TLR7 and TLR8 in humans, and a selective TLR7 antagonist in mice.

MHV370 blocks activation of cell types that drive lupus, including B cells and pDCs.

MHV370 (5 mg, oral) suppresses acute TLR7-dependent immune activation in mice.

MHV370 suppresses ISGs in the TMPD peritonitis model, protects from lupus-like disease in the NZB/W F1 mouse model.

## References

Phil B Alper, et al. *Bioorg Med Chem Lett*. 2020 Sep 1;30(17):127366.

Stuart Hawtin, et al. *Cell Rep Med*. 2023 May 16;4(5):101036.

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

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