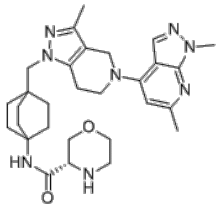
ProbeChem®
Expedite Your Scientific Research

WWW.PROBECHEM.COM

Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	MHV370
Cat. No.	:	PC-20815
CAS No.	:	2205095-75-4
Molecular Formula	:	$C_{29}H_{40}N_8O_2$
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 IC50 of 1.1 and 4.5 nM in cell-based assays.
MHV370 potently inhibited CL307- and R848-driven reporter gene activity in cells with IC50 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 uM.
MHV370 did not lead to cell toxicity at 10 uM, 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 IC50 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!

E-mail: tech@probechem.com