

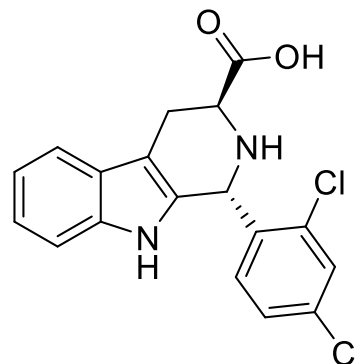
## MMV008138 (1*R*,3*S*) (IspD Inhibitor)

Catalog number: B-4103

Molecular Formula: C<sub>18</sub>H<sub>14</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub>

MW: 361.22

CAS: 1217513-24-0



Alternate Name: (1*R*,3*S*)-1-(2,4-dichlorophenyl)-2,3,4,9-tetrahydro-1*H*-pyrido[3,4-*b*]indole-3-carboxylic acid

Solubility: DMSO, MeOH or EtOH

Storage and Handling: Store dry at 4 °C. Stock solutions should be stored frozen (-20 °C or below).

**Background:** Compounds that target isoprenoid biosynthesis in *Plasmodium falciparum* could be a welcome addition to malaria chemotherapy, since the methylerythritol phosphate (MEP) pathway used by the parasite is not present in humans. MMV008138 targets the apicoplast of *P. falciparum* and that its target in the MEP pathway differs from that of *Fosmidomycin*. The active stereoisomer of MMV008138 was (1*R*,3*S*)-configured which was found to be crucial for inhibition of the parasite growth as MEP pathway-targeting antimalarial agent. Recently some researchers have claimed that they identified the molecular target of MMV008138 as IspD, the third enzyme of the MEP pathway.

**References:** 1) Yao, Zhong-Ke, Krai, Priscilla M. et al. "Determination of the active stereoisomer of the MEP pathway-targeting antimalarial agent MMV008138, and initial structure-activity studies." *Bioorganic & Medicinal Chemistry Letter*, 2015, 25, 1515-151. 2) Wu, W., Herrera, Z, Ebert, D. Baska, K.; Cho, S.H.; Derisi, J. I.; Yeh, E. "A Chemical Rescue Screen Identifies a Plasmodium falciparum Apicoplast Inhibitor Targeting MEP Isoprenoid Precursor Biosynthesis" *Antimicrob. Agents Chemother.* 2015, 59, 356-364.

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

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