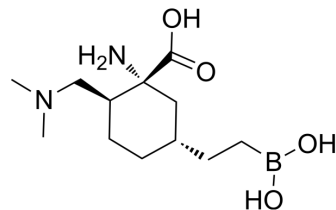


OATD-02

Cat. No.:	HY-155108
CAS No.:	2146132-73-0
Molecular Formula:	C ₁₂ H ₂₅ BN ₂ O ₄
Molecular Weight:	272.15
Target:	Arginase
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	OATD-02 is an orally active, competitive, reversible, noncovalent dual inhibitor of Arginase1 and 2. OATD-02 is a slow offset inhibitor, blocking intracellular arginases with IC ₅₀ s of 20 nM (hARG1), 39 nM (hARG2), 39 nM (mARG1), and 28 nM (rARG1), respectively. OATD-02 abolishes tumor immunosuppression induced by both arginases. OATD-02 can be used for melanoma study ^[1] .								
IC₅₀ & Target	20 nM (hARG1), 39 nM (hARG2), 39 nM (mARG1), 28 nM (rARG1)								
In Vitro	OATD-02 inhibits mouse ARG in BMDM cells with IC ₅₀ of 912.9 nM and human ARG2 in transfected CHO-K1 cells with IC ₅₀ of 171.6 nM, and inhibits hARG1 in human primary hepatocytes at a much higher micromolar concentration (IC ₅₀ = 13 mM) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	<p>OATD-02 (10 mg/kg, oral gavage) generates a strong and a long pharmacodynamic effect in vivo, and has oral bioavailability of 13%, 30%, and 61% from mouse through rat to dog, respectively^[1].</p> <p>OATD-02 (5 mg/kg, oral gavage) increases fourfold of the L-arginine concentration in plasma sustained even 1 week after end of a treatment^[1].</p> <p>OATD-02 (twice per day at 50 mg/kg, oral gavage) inhibits the tumor growth in B16F10 orthotopic xenograft tumor model^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>B16F10 orthotopic xenograft tumor model^[1]</td> </tr> <tr> <td>Dosage:</td> <td>Twice per day at 50 mg/kg for 15days</td> </tr> <tr> <td>Administration:</td> <td>Oral gavage</td> </tr> <tr> <td>Result:</td> <td>Inhibited tumor growth (TGI 46%).</td> </tr> </table>	Animal Model:	B16F10 orthotopic xenograft tumor model ^[1]	Dosage:	Twice per day at 50 mg/kg for 15days	Administration:	Oral gavage	Result:	Inhibited tumor growth (TGI 46%).
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Dosage:	Twice per day at 50 mg/kg for 15days								
Administration:	Oral gavage								
Result:	Inhibited tumor growth (TGI 46%).								

REFERENCES

[1]. Borek B, et al. Arginase 1/2 Inhibitor OATD-02: From Discovery to First-in-man Setup in Cancer Immunotherapy. Mol Cancer Ther. 2023;22(7):807-817.

Caution: Product has not been fully validated for medical applications. For research use only.

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