# AG-636

**Cat. No.:** HY-137463

**CAS No.:** 1623416-31-8

**Molecular Formula:** $C_{21}H_{17}N_3O_2$

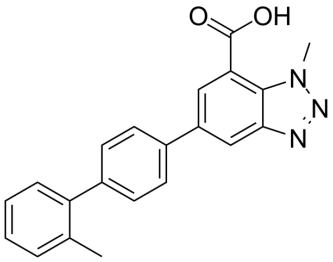
**Molecular Weight:** 343.38

**Target:** Dihydroorotate Dehydrogenase; DNA/RNA Synthesis

**Pathway:** Metabolic Enzyme/Protease; Cell Cycle/DNA Damage

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 31.25 mg/mL (91.01 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.9122 mL | 14.5611 mL | 29.1223 mL |
| | 5 mM | 0.5824 mL | 2.9122 mL | 5.8245 mL |
| | 10 mM | 0.2912 mL | 1.4561 mL | 2.9122 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.08 mg/mL (6.06 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.06 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

AG-636 is a potent, reversible, selective and orally active dihydroorotate dehydrogenase (DHODH) inhibitor with an $IC_{50}$ of 17 nM. AG-636 has strong anticancer effects[1].

**$IC_{50}$ & Target**

IC50: 17 nM (Dihydroorotate dehydrogenase (DHODH))[1]

**In Vitro**

AG-636 has strong growth-inhibitory activity in cancer cell lines of hematologic versus solid tumor origin[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

AG-636 (10-100 mg/kg ; oral gavage; twice daily; for 14 days) treatment results in robust tumor growth inhibition in the OCILY19 DLBCL tumor xenograft model[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | Transgenic female 6-8-week-old CB17/Icr-Prkd$^{cscid}$/IcrIcoCrl (CB17 SCID) mice injected with OCILY19 cells[1] |
| Dosage: | 10 mg/kg, 30 mg/kg, or 100 mg/kg |
| Administration: | Oral gavage; twice daily; for 14 days |
| Result: | Resulted in robust tumor growth inhibition in xenograft lymphoma tumor models. |

## REFERENCES

[1]. Gabrielle McDonald, et al. Selective Vulnerability to Pyrimidine Starvation in Hematologic Malignancies Revealed by AG-636, a Novel Clinical-Stage Inhibitor of Dihydroorotate Dehydrogenase. Mol Cancer Ther. 2020 Dec;19(12):2502-2515.



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