# hDHODH-IN-10

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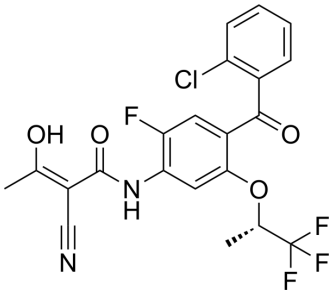
| **Cat. No.:** | HY-151381 |
| **Molecular Formula:** | $C_{21}H_{15}ClF_4N_2O_4$ |
| **Molecular Weight:** | 470.8 |
| **Target:** | Dihydroorotate Dehydrogenase |
| **Pathway:** | Metabolic Enzyme/Protease |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |




## BIOLOGICAL ACTIVITY

**Description**

hDHODH-IN-10 is a selective, potent and orally active hDHODH inhibitor, with an $IC_{50}$ value of 10.9 nM. hDHODH-IN-10 forms hydrogen bonds with key residues Arg136 and Gln47. hDHODH-IN-10 inhibits the proliferation of cancer cells. hDHODH-IN-10 can be used in the research of cancers, such as AML, colorectal cancer[1].

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

IC50: hDHODH (10.9 nM)[1].

**In Vitro**

hDHODH-IN-10 (compound 7d, 1 nM-100 μM) displays anti-proliferative activities against multiple human cancer cells[1].
hDHODH-IN-10 (0.0625-0.25 μM, 24 h) increases the percentage of S-phase cells in Raji and HCT116 cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

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| Cell Line: | U937, HCT116, A375, Kasumi-1 and KG-1 cells |
| Concentration: | 0-10 μM approximately |
| Incubation Time: | 96 h |
| Result: | Inhibits cell proliferation with $IC_{50}$ values of 0.1-0.8 μM. |

Cell Cycle Analysis[1]

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|---|---|
| Cell Line: | Raji and HCT116 cells |
| Concentration: | 0.0625, 0.125 and 0.25 μM |
| Incubation Time: | 24 h |
| Result: | Increased the percentage of S-phase cells from 42.8% to 54.2%, 60.6% and 67.1%, respectively. |

**In Vivo**

hDHODH-IN-10 (compound 7d, 30 mg/kg, oral administration) inhibits tumor growth in Raji and HCT116 cells xenograft mice model[1].
hDHODH-IN-10 (500 mg/kg, oral administration) exhibits a favorable safety profile[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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| Animal Model: | Raji and HCT116 cells xenograft mice model[1] |
| Dosage: | 30 mg/kg |
| Administration: | Oral administration |
| Result: | Showed a tumor growth inhibitory (TGI) rate of 58.3% (Raji model) and 42.1% (HCT116 model). |

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| Animal Model: | BALB/c mice (acute toxicity assay) [1] |
| Dosage: | 500 mg/kg |
| Administration: | Oral administration |
| Result: | $LD_{50}$ is about 500 mg/kg.<br>Induced a weak dysfunction of liver. |

## REFERENCES

[1]. Chungen Li, et al. Discovery of potent human dihydroorotate dehydrogenase inhibitors based on a benzophenone scaffold. European Journal of Medicinal Chemistry, 2022, 243 (5), 114737.



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