



www.MedChemExpress.com

Inhibitors, Screening Libraries, Proteins

Dihydroorotate Dehydrogenase

DHODH

Dihydroorotate dehydrogenase (DHODH) is the fourth enzyme in the de novo pyrimidine biosynthesis pathway, serving as the catalyst to oxidize the dihydroorotate to orotic acid in the biosynthesis of uridine monophosphate (UMP). DHODH is a known target for autoimmune diseases as well as an important target for malaria.

Based on localization and electron acceptor, DHODHs have classified into two families: Family 1 members are soluble proteins localized to the cytosol, while family 2 members are membrane proteins localized to the inner mitochondrial membrane. Family 1 is further subdivided into family 1A and family 1B, which use fumarate and NAD^+ (respectively) as electron acceptors. Family 2 DHODH enzymes use respiratory quinones as electron acceptors.

Dihydroorotate Dehydrogenase Inhibitors

(E/Z)-Ginkgolic acid C17:2

Cat. No.: HY-N7961

(E/Z)-Ginkgolic acid C17:2, isolated from Ginkgo biloba, can bind with human **dihydroorotate dehydrogenase (DHODH)** tightly.

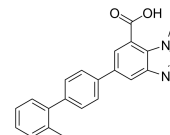


Purity: >98%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg

AG-636

Cat. No.: HY-137463

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.



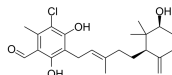
Purity: 98.02%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Ascochlorin A

(Acremochlorin A)

Cat. No.: HY-139632

Ascochlorin A is a novel and potent **hDHODH** inhibitor ($K_D = 3.29 \mu\text{M}$) for treatment of triple-negative breast cancer.

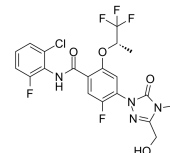


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

BAY-2402234

Cat. No.: HY-112645

BAY-2402234 is a selective **dihydroorotate dehydrogenase (DHODH)** inhibitor for the treatment of myeloid malignancies.

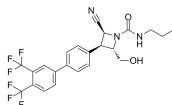


Purity: 99.95%
Clinical Data: Phase 1
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

BRD9185

Cat. No.: HY-120924

BRD9185 is a **Dihydroorotate dehydrogenase (DHODH)** inhibitor, with an EC_{50} of 16 nM against multidrug-resistant blood-stage parasites in vitro and is curative after just three doses in a *P. berghei* mouse model.



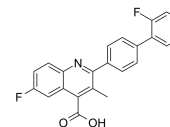
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

Brequinar

(DUP785; NSC 368390)

Cat. No.: HY-108325

Brequinar (DUP785) is a potent inhibitor of **dihydroorotate dehydrogenase (DHODH)** with an IC_{50} of 5.2 nM for **human DHODH**. Brequinar has potent activities against a broad spectrum of viruses. Brequinar also has an anti-SARS2 activity.

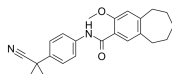


Purity: 99.75%
Clinical Data: Phase 2
Size: 10 mM × 1 mL, 5 mg, 10 mg

CHIKV-IN-2

Cat. No.: HY-132174

CHIKV-IN-2 is a potent inhibitor against **Chikungunya virus (CHIKV)**, with excellent cellular antiviral activity ($EC_{90} = 270 \text{ nM}$) and improved liver microsomal stability.

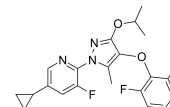


Purity: 98.15%
Clinical Data: No Development Reported
Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

DHODH-IN-1

Cat. No.: HY-135282

DHODH-IN-1 (compound 18d) is a potent **Dihydroorotate Dehydrogenase (DHODH)** inhibitor with an IC_{50} of 25 nM. DHODH-IN-1 is an inhibitor of pyrimidine biosynthesis pathway.

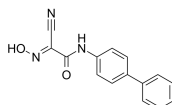


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

DHODH-IN-11

Cat. No.: HY-135675

DHODH-IN-11 (Compound 14b) is a Leflunomide derivative and a weak **dihydroorotate dehydrogenase (DHODH)** inhibitor with a pK_a of 5.03.

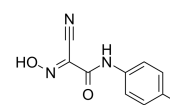


Purity: 99.94%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

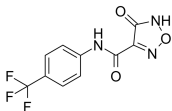
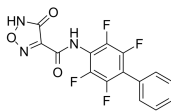
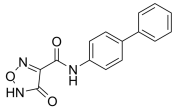
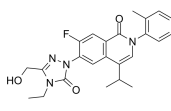
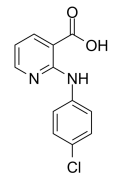
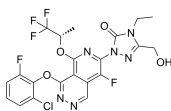
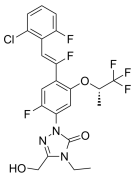
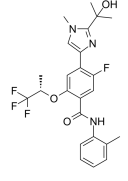
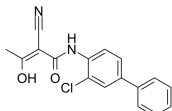
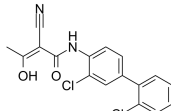
DHODH-IN-12

Cat. No.: HY-135676

DHODH-IN-12 (Compound 12b) is a Leflunomide derivative and a weak **dihydroorotate dehydrogenase (DHODH)** inhibitor with a pK_a of 5.07.



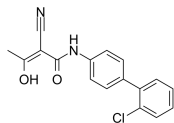
Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

| | |
|--|--|
| <p>DHODH-IN-13</p> <p>Cat. No.: HY-135677</p> | <p>DHODH-IN-14</p> <p>Cat. No.: HY-135678</p> |
| <p>DHODH-IN-13 (Compound 7a) is a hydroxyfurazan analog of A771726. DHODH-IN-13 is a dihydroorotate dehydrogenase (DHODH) inhibitor with an IC_{50} of 4.3 μM for rat liver DHODH. DHODH-IN-13 can be used for rheumatoid arthritis.</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> | <p>DHODH-IN-14 (Compound 7l) is a hydroxyfurazan analog of A771726. DHODH-IN-14 is a dihydroorotate dehydrogenase (DHODH) inhibitor with an IC_{50} of 0.49 μM for rat liver DHODH. DHODH-IN-14 can be used for rheumatoid arthritis.</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> |
| <p>DHODH-IN-15</p> <p>Cat. No.: HY-135679</p> | <p>DHODH-IN-16</p> <p>Cat. No.: HY-139189</p> |
| <p>DHODH-IN-15 (Compound 7b) is a hydroxyfurazan analog of A771726. DHODH-IN-15 is a dihydroorotate dehydrogenase (DHODH) inhibitor with an IC_{50} of 11 μM for rat liver DHODH. DHODH-IN-15 can be used for rheumatoid arthritis.</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> | <p>DHODH-IN-16 is a potent dihydroorotate dehydrogenase (DHODH) inhibitor with an IC_{50} of 0.396 nM for human DHODH.</p>  <p>Purity: 99.88% Clinical Data: No Development Reported Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</p> |
| <p>DHODH-IN-17</p> <p>Cat. No.: HY-128068</p> | <p>DHODH-IN-18</p> <p>Cat. No.: HY-139889</p> |
| <p>DHODH-IN-17, a 2-anilino nicotinic acid, is a human DHODH inhibitor (IC_{50}=0.40 μM). DHODH-IN-17 can be used for the research of acute myeloid leukemia (AML).</p>  <p>Purity: 99.91% Clinical Data: No Development Reported Size: 5 mg, 10 mg, 25 mg</p> | <p>DHODH-IN-18 is a human DHODH inhibitor (IC_{50} = 0.2 nM).</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> |
| <p>DHODH-IN-19</p> <p>Cat. No.: HY-144169</p> | <p>DHODH-IN-20</p> <p>Cat. No.: HY-144371</p> |
| <p>DHODH-IN-19 is a potent inhibitor of DHODH. DHODH is present in the inner membrane of human mitochondria and is an iron-containing flavin-dependent enzyme. DHODH-IN-19 inhibits tumor growth.</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> | <p>DHODH-IN-20 (Compound 133) is a potent inhibitor of DHODH. DHODH is present in the inner membrane of human mitochondria and is an iron-containing flavin-dependent enzyme. DHODH-IN-20 inhibits tumor growth. DHODH-IN-20 has the potential for the research of acute myelogenous leukemia.</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> |
| <p>DHODH-IN-3</p> <p>Cat. No.: HY-135618</p> | <p>DHODH-IN-4</p> <p>Cat. No.: HY-135619</p> |
| <p>DHODH-IN-3 (compound 3) is a potent inhibitor of Human Dihydroorotate Dehydrogenase (HsDHODH) with an IC_{50} value of 261 nM. DHODH-IN-3 binds to the the ubiquinone binding cavities in DHODH with a K_d^{app} of 32 nM.</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> | <p>DHODH-IN-4 (compound 17) is a human and <i>Plasmodium falciparum</i> dihydroorotate dehydrogenase (DHODH) inhibitor, with IC_{50} values of 4 μM and 0.18 μM for PfDHODH and HsDHODH, respectively. DHODH-IN-4 (compound 17) possess antimalarial activity.</p>  <p>Purity: >98% Clinical Data: No Development Reported Size: 1 mg, 5 mg</p> |

DHODH-IN-8

Cat. No.: HY-135666

DHODH-IN-8 (Compound 27) is an inhibitor of human and *Plasmodium falciparum* dihydroorotate dehydrogenase (DHODH) with IC_{50} s of 0.13 μ M and 47.4 μ M, and K_s of 0.016 μ M and 5.6 μ M, respectively. DHODH-IN-8 has antimalarial activity.

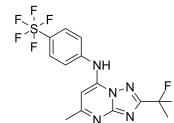


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

DSM265

Cat. No.: HY-100184

DSM265 is a long-duration inhibitor of *P. falciparum* dihydroorotate dehydrogenase (PfDHODH) with an IC_{50} of 8.9 nM. DSM265 can also inhibit the growth of Pf3D7 parasites with an EC_{50} of 4.3 nM.

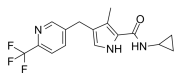


Purity: 99.72%
Clinical Data: Phase 2
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg, 250 mg, 500 mg

DSM502

Cat. No.: HY-132170

DSM502 is a pyrrole-based Dihydroorotate Dehydrogenase (DHODH) inhibitor. DSM502 exhibits nanomolar potency against *Plasmodium* DHODH and *Plasmodium* parasites, with no inhibition of mammalian DHODHs.

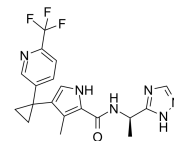


Purity: 99.57%
Clinical Data: No Development Reported
Size: 10 mM \times 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

DSM705

Cat. No.: HY-132171

DSM705 is a pyrrole-based Dihydroorotate Dehydrogenase (DHODH) inhibitor. DSM705 exhibits nanomolar potency against *Plasmodium* DHODH and *Plasmodium* parasites, with no inhibition of mammalian DHODHs. DSM705 is a potent antimalarial compound.

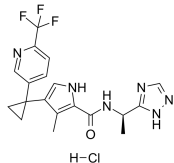


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

DSM705 hydrochloride

Cat. No.: HY-132171A

DSM705 hydrochloride, an orally active antimalarial compound, is a pyrrole-based Dihydroorotate Dehydrogenase (DHODH) inhibitor.

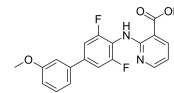


Purity: 99.56%
Clinical Data: No Development Reported
Size: 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

Farudodstat (ASLAN003)

Cat. No.: HY-129239

Farudodstat (ASLAN003) is an orally active and potent Dihydroorotate Dehydrogenase (DHODH) inhibitor with an IC_{50} of 35 nM for human DHODH enzyme. Farudodstat inhibits protein synthesis via activation of AP-1 transcription factors.

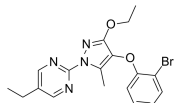


Purity: 99.95%
Clinical Data: Phase 2
Size: 10 mM \times 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg

hDHODH-IN-3

Cat. No.: HY-135570

hDHODH-IN-3 (compound 21d) is a human dihydroorotate dehydrogenase (HsDHODH) inhibitor, inhibits measles virus replication with a $pMIC_{50}$ value of 8.6.

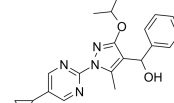


Purity: 99.86%
Clinical Data: No Development Reported
Size: 10 mM \times 1 mL, 5 mg, 10 mg, 50 mg, 100 mg

hDHODH-IN-4

Cat. No.: HY-128787

hDHODH-IN-4 is a potent human dihydroorotate dehydrogenase (DHODH) inhibitor, with a pIC_{50} of 7.8 for human recombinant DHODH. hDHODH-IN-4 inhibits measles virus replication, with a $pMIC_{50}$ of 8.8.

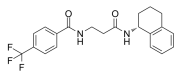


Purity: 99.75%
Clinical Data: No Development Reported
Size: 10 mM \times 1 mL, 5 mg, 10 mg, 50 mg

hDHODH-IN-5

Cat. No.: HY-135664

DHODH-IN-7 is a human dihydroorotate dehydrogenase (DHODH) inhibitor, with an IC_{50} of 0.91 μ M. DHODH-IN-7 induces differentiation in acute myeloid leukemia.

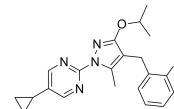


Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

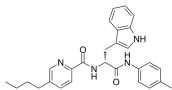
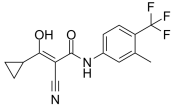
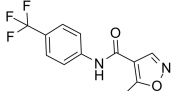
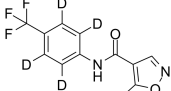
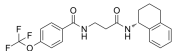
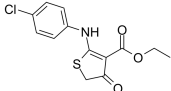
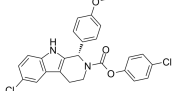
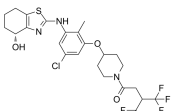
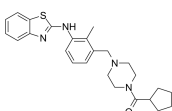
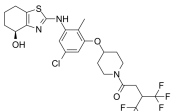
hDHODH-IN-7

Cat. No.: HY-135667

DHODH-IN-9 (Compound 10k) is an azine-bearing analogue and is a human dihydroorotate dehydrogenase inhibitor. DHODH-IN-9 has antiviral effect with a $pMIC_{50}$ of 7.4.



Purity: >98%
Clinical Data: No Development Reported
Size: 1 mg, 5 mg

| | |
|--|---|
| <p>Indoluidin E</p> <p>Cat. No.: HY-139825</p> | <p>Laflunimus (HR325)</p> <p>Cat. No.: HY-101813</p> |
| <p>Indoluidin E selectively inhibits DHODH and suppresses cancer cell growth.</p>  <p>Purity: >98%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 1 mg, 5 mg</p> | <p>Laflunimus (HR325) is an immunosuppressive agent and an analogue of the Leflunomide-active metabolite A77 1726. Laflunimus is an orally active inhibitor of dihydroorotate dehydrogenase (DHODH).</p>  <p>Purity: 99.26%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</p> |
| <p>Leflunomide (HWA486; RS-34821; SU101)</p> <p>Cat. No.: HY-B0083</p> | <p>Leflunomide-d4</p> <p>Cat. No.: HY-B0083S</p> |
| <p>Leflunomide is a pyrimidine synthesis inhibitor, inhibiting dihydroorotate dehydrogenase (DHODH), and acts as a disease-modifying antirheumatic drug.</p>  <p>Purity: 99.72%</p> <p>Clinical Data: Launched</p> <p>Size: 10 mM × 1 mL, 100 mg, 500 mg</p> | <p>Leflunomide-d4 (HWA486-d4) is the deuterium labeled Leflunomide. Leflunomide is a pyrimidine synthesis inhibitor, inhibiting dihydroorotate dehydrogenase (DHODH), and acts as a disease-modifying antirheumatic drug.</p>  <p>Purity: >98%</p> <p>Clinical Data:</p> <p>Size: 1 mg, 10 mg</p> |
| <p>ML390</p> <p>Cat. No.: HY-100688</p> | <p>PfDHODH-IN-2</p> <p>Cat. No.: HY-W078844</p> |
| <p>ML390 is a potent dihydroorotate dehydrogenase (DHODH) inhibitor. ML390 is an inducer of myeloid differentiation and causes myeloid differentiation in murine (ER-HoxA9) and human (U937 and THP1) acute myeloid leukemia (AML) models.</p>  <p>Purity: 98.77%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 10 mM × 1 mL, 5 mg, 10 mg, 50 mg, 100 mg</p> | <p>PfDHODH-IN-2, a dihydrothiophenone derivative (Compound 11), is a potent Plasmodium falciparum dihydroorotate dehydrogenase (PfDHODH) inhibitor with an IC₅₀ of 1.11 μM. PfDHODH-IN-2 acts as an antimalarial agent and can be used for the research of malaria.</p>  <p>Purity: 99.83%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg, 100 mg</p> |
| <p>PTC299</p> <p>Cat. No.: HY-124593</p> | <p>RORyt/DHODH-IN-1</p> <p>Cat. No.: HY-142843</p> |
| <p>PTC299 is an orally active inhibitor of VEGFA mRNA translation that selectively inhibits VEGF protein synthesis at the post-transcriptional level. PTC299 is also a potent inhibitor of dihydroorotate dehydrogenase (DHODH).</p>  <p>Purity: 99.52%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 10 mM × 1 mL, 5 mg, 10 mg, 25 mg, 50 mg</p> | <p>RORyt/DHODH-IN-1 (compound (R)-14d) is a potent and orally active dual RORyt/DHODH inhibitor, with IC₅₀s of 0.083 μM and 0.172 μM, respectively. RORyt/DHODH-IN-1 exhibits remarkable in vivo anti-inflammatory activity.</p>  <p>Purity: >98%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 1 mg, 5 mg</p> |
| <p>RORyt/DHODH-IN-2</p> <p>Cat. No.: HY-142834</p> | <p>RORyt/DHODH-IN-3</p> <p>Cat. No.: HY-142847</p> |
| <p>RORyt/DHODH-IN-2 (compound 1) is a potent dual RORyt/DHODH inhibitor. RORyt/DHODH-IN-2 can be used for inflammatory bowel disease (IBD) research.</p>  <p>Purity: >98%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 1 mg, 5 mg</p> | <p>RORyt/DHODH-IN-3 (compound (S)-14d) is a dual RORyt/DHODH inhibitor, with IC₅₀s of 0.098 μM and 0.432 μM, respectively. RORyt/DHODH-IN-3 exhibits remarkable in vivo anti-inflammatory activity.</p>  <p>Purity: >98%</p> <p>Clinical Data: No Development Reported</p> <p>Size: 1 mg, 5 mg</p> |

