BAY-2402234

Cat. No.: HY-112645

CAS No.: 2225819-06-5

Molecular Formula: $C_{21}H_{18}ClF_5N_4O_4$

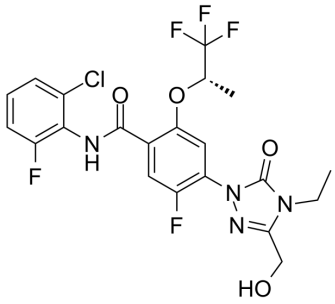
Molecular Weight: 520.84

Target: DNA/RNA Synthesis; Dihydroorotate Dehydrogenase

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

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (240.00 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9200 mL	9.5999 mL	19.1998 mL
	5 mM	0.3840 mL	1.9200 mL	3.8400 mL
	10 mM	0.1920 mL	0.9600 mL	1.9200 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 (3.99 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

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

IC_{50} & Target

DHODH[1].

In Vitro

BAY-2402234 is a selective low-nanomolar inhibitor of human DHODH enzymatic activity. In vitro, it potently inhibits proliferation of AML cell lines in the sub-nanomolar to low-nanomolar range. BAY-2402234 induces differentiation of AML cell lines also in a sub-nanomolar to low-nanomolar range, demonstrating the anticipated mode of action in cellular

	mechanistic assays[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	BAY-2402234 exhibits strong in vivo anti-tumor efficacy in monotherapy in several subcutaneous and disseminated AML xenografts as well as AML patient-derived xenograft (PDX) models. Target engagement of the novel DHODH inhibitor BAY-2402234 can be observed by increase of tumoral and plasma dihydroorotate levels after treatment with the inhibitor. Consistent with the in vitro data BAY-2402234 induces AML differentiation in vivo as detected by upregulation of differentiation cell surface markers in xenograft and PDX models after treatment with the inhibitor. Furthermore, differentiation-associated transcriptomic changes are evident following a single administration of BAY-2402234 in vivo[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Discov. 2022 Nov 24;8(1):464.
- iScience. 2021, 102494.
- J Biol Chem. 2023 Oct 17.
- Research Square Print. 2022 Aug.

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REFERENCES

[1]. Andreas Janzer, et al. Abstract DDT02-04: BAY 2402234: A novel, selective dihydroorotate dehydrogenase (DHODH) inhibitor for the treatment of myeloid malignancies. AACR Annual Meeting 2018; April 14-18, 2018; Chicago, IL.

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