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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Triclabendazole

Cat. No.: HY-B0621

CAS No.: 68786-66-3

Molecular Formula: $C_{14}H_9Cl_3N_2OS$

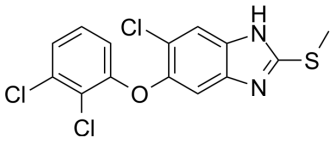
Molecular Weight: 359.66

Target: Parasite; Caspase; Bcl-2 Family; PARP; Pyroptosis

Pathway: Anti-infection; Apoptosis; Cell Cycle/DNA Damage; Epigenetics; Immunology/Inflammation

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 : 100 mg/mL (278.04 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.7804 mL	13.9020 mL	27.8040 mL
5 mM	0.5561 mL	2.7804 mL	5.5608 mL
10 mM	0.2780 mL	1.3902 mL	2.7804 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: ≥ 2.5 mg/mL (6.95 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.78 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.78 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Triclabendazole is an orally active parasite inhibitor. Triclabendazole has anti-Leishmania activity and induces gasdermin E (GSDME)-dependent pyroptosis by caspase-3 activation. Triclabendazole can be used for the research of fasciola hepatica[1][2][3].

IC_{50} & Target				
	Caspase-8	Caspase-9	Caspase 3	Leishmania
	Bcl-2	Bax	PARP	

In Vitro

Triclabendazole (20-320 μM, 24-48 h) has cytotoxicity on MCF-7 and MDA-MB-231 cells[1].
Triclabendazole (40-160 μM, 24 h) induces apoptosis in MCF-7 and MDA-MB-231 cells[1].
Triclabendazole (0.97-500 μM, 48-72 h) have low cytotoxicity in Macrophages[3].
Triclabendazole (45.67 μM, 72 h) shows significant alterations in cell cycle with a decrease in G1 from 74.6% to 54.3% and an increase in S and G2 from 9.7% to 16.6% and 11.9% to 25.4%, respectively phases in promastigotes[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	MCF-7 and MDA-MB-231 cells
Concentration:	20 μM, 40 μM, 80 μM, 160 μM, 320 μM,
Incubation Time:	24 h, 48 h
Result:	Significantly decreased the metabolic activity.

Apoptosis Analysis[1]

Cell Line:	MCF-7 and MDA-MB-231 cells
Concentration:	40 μM, 80 μM, 160 μM
Incubation Time:	24 h
Result:	Significantly induced apoptosis at 160 μM. Up-regulated the expression of Bax and down-regulated the expression of Bcl-2. Activated and cleaved caspase-8 and caspase-9 in a dose-dependent manner.

In Vivo

Triclabendazole (20-100 mg/kg, Intraperitoneal injection, twice a week for 2 weeks) has anti-tumor effect in the xenograft MDA-MB-231 cells model nude mice[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Life Sci. 2021 Jun 23;280:119752.
- J Antibiot (Tokyo). 2022 May;75(5):287-295.
- bioRxiv. 2021 Jan 27.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Yan L, et al. Triclabendazole induces pyroptosis by activating caspase-3 to cleave GSDME in breast cancer cells [J]. Frontiers in Pharmacology, 2021, 12: 670081.

[2]. Devine C, et al. Potentiation of triclabendazole action in vivo against a triclabendazole-resistant isolate of Fasciola hepatica following its co-administration with the metabolic inhibitor, ketoconazole [J]. Veterinary parasitology, 2012, 184(1): 37-47.

[3]. Borges B S, et al. In vitro anti-Leishmania activity of triclabendazole and its synergic effect with amphotericin B [J]. Frontiers in Cellular and Infection Microbiology, 2023, 12: 1044665.

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

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