ZIM

Cat. No.: HY-152246

CAS No.: 301298-87-3

Molecular Formula: $C_{20}H_{19}N_3O_3$

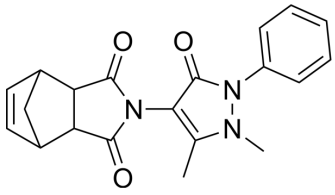
Molecular Weight: 349.38

Target: DNA/RNA Synthesis

Pathway: 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 : 50 mg/mL (143.11 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8622 mL	14.3111 mL	28.6221 mL
	5 mM	0.5724 mL	2.8622 mL	5.7244 mL
	10 mM	0.2862 mL	1.4311 mL	2.8622 mL

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

BIOLOGICAL ACTIVITY

Description

ZIM, a norbornene derived from 4-Aminoantipyrine, is a potent inducer of DNA damage, causing genomic and chromosomal damage as well as inducing cell death and activating phagocytosis. ZIM has chemotherapeutic potential for use in cancer research[1].

In Vivo

ZIM (i.p., 12, 24 and 48 mg/kg) can effectively reduce the frequency of chromosome micronucleus at all doses at 24 and 72 h in adult male Swiss mice, and has certain chemoprophylaxis effect, and the percentage of damage reduction ranges from 38.36 to 83.26%[1].

ZIM (i.p., 12, 24 and 48 mg/kg) reduces the frequency of cisplatin-CIS and doxorubicin-DOX-induced liver and kidney cell death. At 12, 24 and 48 mg/kg dosages, the percentage of liver damage reduction in CIS group are 79.27, 75.20 and 52.84%, and that in DOX group are 62.06, 59.44 and 77.80%, respectively. The reduction percentages of kidney injury in CIS group are 45.29, 36.09 and 41.61%, and those in DOX group are 28.00, 21.41 and 30.82%, respectively[1].

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

REFERENCES

[1]. Rodrigo Juliano Oliveira, et al. ZIM, a Norbornene Derived from 4-Aminoantipyrine, Induces DNA Damage and Cell Death but in Association Reduces the Effect of Commercial Chemotherapeutics. Chem Res Toxicol. 2022 Dec 22.

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