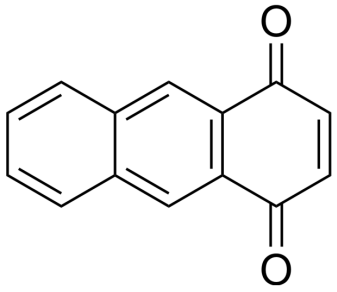
1,4-Anthraquinone

Cat. No.:	HY-W077242
CAS No.:	635-12-1
Molecular Formula:	$C_{14}H_8O_2$
Molecular Weight:	208.21
Target:	DNA/RNA Synthesis
Pathway:	Cell Cycle/DNA Damage
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	1,4-Anthraquinone is a potent anticancer agent. 1,4-Anthraquinone blocks nucleoside transport, inhibits macromolecule synthesis, induces DNA fragmentation, and decreases the growth and viability of cancer cells. 1,4-Anthraquinone can be used to research anti-leukemia[1].
IC_{50} & Target	DNA/RNA synthesis[1]

In Vitro

1,4-Anthraquinone (2.62 nM-1.6 μM; 4 days) induces significant antiproliferative and cytotoxic effects in L1210 cells after 4 days at 6.55 nM; inhibits cell viability with IC_{50}s of 100 nM at day 2 and 25 nM at day 4[1].

1,4-Anthraquinone (40.96 nM-25 μM; 30 min; L1210 cells) inhibits nucleoside transport by 71 and 92% and DNA synthesis by 84 and 96% at 4 and 10 μM, respectively, and are both irreversible upon drug removal[1].

1,4-Anthraquinone (0.1024-25 μM; 3 h) inhibits the rates of RNA and protein syntheses (IC_{50} = 2 μM) in a dose-dependent manner[1].

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

Cell Proliferation Assay[1]

Cell Line:	L1210 cells
Concentration:	2.62 nM-1.6 μM
Incubation Time:	4 days
Result:	Induced significant antiproliferative and cytotoxic effects after 4 days at 6.55 nM.

Cell Viability Assay[1]

Cell Line:	L1210 cells
Concentration:	2.62 nM-1.6 μM
Incubation Time:	4 days
Result:	Inhibited cell viability with IC_{50}s of 100 nM at day 2 and 25 nM at day 4.

REFERENCES

[1]. Perchellet EM, et al. 1,4-Anthraquinone: an anticancer drug that blocks nucleoside transport, inhibits macromolecule synthesis, induces DNA fragmentation, and decreases the growth and viability of L1210 leukemic cells in the same nanomolar range as daunorubicin in vitro. Anticancer Drugs. 2000 Jun;11(5):339-52.

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