Xanthopterin hydrate

Cat. No.: HY-119674A

CAS No.: 5979-01-1

Molecular Formula: $C_6H_7N_5O_3$

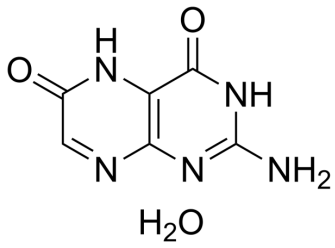
Molecular Weight: 197.15

Target: DNA/RNA Synthesis

Pathway: Cell Cycle/DNA Damage

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 : 5 mg/mL (25.36 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.0723 mL	25.3614 mL	50.7228 mL
5 mM	1.0145 mL	5.0723 mL	10.1446 mL
10 mM	0.5072 mL	2.5361 mL	5.0723 mL

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

BIOLOGICAL ACTIVITY

Description

Xanthopterin hydrate, an unconjugated pteridine compound, is the main component of the yellow granule in the Oriental hornet bear wings, produces a characteristic excitation/emission maximum at 386/456 nm[2]. Xanthopterin hydrate(XPT) causes renal growth and hypertrophy in rat[1].Xanthopterin hydrate inhibits RNA synthesis[4].

In Vitro

Xanthopterin (7.8-250 mM; 24 hours) show a significant reduction in mitochondrial activity with respect to controls (IC_{50}=109 mM)[2].

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

Cell Viability Assay[2]

Cell Line:	MCF-7 cells
Concentration:	7.8 mM-250 mM
Incubation Time:	24 hours
Result:	Resulted in a reduction in mitochondrial activity.

REFERENCES

[1]. Xanthopterin (XPT), an unconjugated pteridine compound, affects cell growth and differentiation. When injected into rats, XPT has caused changes that have been interpreted as renal growth and hypertrophy.

[2]. Lord JL, et al. Cytotoxicity of xanthopterin and isoxanthopterin in MCF-7 cells. Cancer Lett. 2005 May 10;222(1):119-24.

[3]. Plotkin M, et al. Xanthopterin in the Oriental hornet (Vespa orientalis): light absorbance is increased with maturation of yellow pigment granules. Photochem Photobiol. 2009 Jul-Aug;85(4):955-61.

[4]. Ziegler I, et al. Pterins and the regulation of lymphocyte activation on the mode of xanthopterin action. Hoppe Seylers Z Physiol Chem. 1984 Jun;365(6):667-73.

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