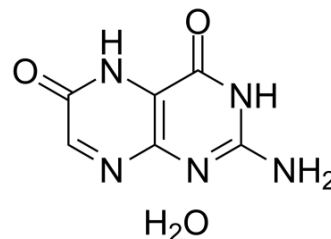


Xanthopterin (hydrate)

Cat. No.:	HY-119674A		
CAS No.:	5979-01-1		
Molecular Formula:	C ₆ H ₇ N ₅ O 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	6 months
		-20°C	1 month



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	<p>Xanthopterin (7.8-250 mM; 24 hours) show a significant reduction in mitochondrial activity with respect to controls (IC₅₀=109 mM)^[2].</p> <p>Cell Viability Assay^[2]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>MCF-7 cells</td> </tr> <tr> <td>Concentration:</td> <td>7.8 mM-250 mM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Resulted in a reduction in mitochondrial activity.</td> </tr> </table>	Cell Line:	MCF-7 cells	Concentration:	7.8 mM-250 mM	Incubation Time:	24 hours	Result:	Resulted in a reduction in mitochondrial activity.
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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.

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

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