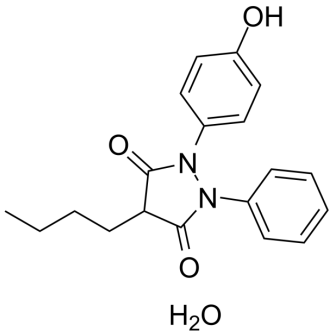
Oxyphenbutazone monohydrate

Cat. No.:	HY-B1355
CAS No.:	7081-38-1
Molecular Formula:	$C_{19}H_{22}N_2O_4$
Molecular Weight:	342.39
Target:	Bacterial; COX
Pathway:	Anti-infection; Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Oxyphenbutazone monohydrate is a Phenylbutazone (HY-B0230) metabolite, with anti-inflammatory effect. Oxyphenbutazone monohydrate is an orally active non-selective COX inhibitor. Oxyphenbutazone monohydrate selectively kills non-replicating Mycobaterium tuberculosis[1][2].
IC_{50} & Target	COX, Bacteria[1][2]

In Vitro

Oxyphenbutazone enhances the anticancer efficiency of Methotrexate (MTX) (HY-14519) in Hep3B cells[1].
Oxyphenbutazone (2.5-7.5 μM; 48 hours) co-treatment with (MTX, 0.25-1.0 μM) shows potential cytotoxicity against Hep3B cells[1].
Oxyphenbutazone exhibits reparative effects in the hepatocytes[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	Hep3B cells
Concentration:	2.5 μM, 5 μM, 7.5 μM
Incubation Time:	48 hours
Result:	Enhanced the cytotoxicity of MTX.

In Vivo

Oxyphenbutazone (70 mg/kg/week; p.o.; in two divided doses; for 13 weeks) exerts potential anticancer activity when co-treatment with MTX (5.0 or 2.5 mg/kg/week; i.p.)[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Wistar strain albino male rats (5-6 weeks; 150-220 g)[1]
Dosage:	70 mg/kg/week (co-treatment with MTX 5.0 or 2.5 mg/kg/week)
Administration:	PO; once a week; in two divided doses; for 13 weeks
Result:	Exerted potential anticancer activity in rats when co-treatment with MTX.

REFERENCES

[1]. Saleem S, et al. Oxyphenbutazone promotes cytotoxicity in rats and Hep3B cellsvia suppression of PGE2 and deactivation of Wnt/β-catenin signaling pathway. Mol Cell Biochem. 2018 Jul;444(1-2):187-196.

[2]. Gold B, et al. Nonsteroidal anti-inflammatory drug sensitizes Mycobacterium tuberculosis to endogenous and exogenous antimicrobials. Proc Natl Acad Sci U S A. 2012 Oct 2;109(40):16004-11.

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