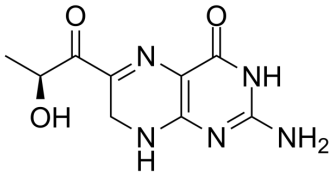
L-Sepiapterin

Cat. No.:	HY-112234
CAS No.:	17094-01-8
Molecular Formula:	$C_9H_{11}N_5O_3$
Molecular Weight:	237.22
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	L-Sepiapterin (Sepiapterin) is a precursor of the endothelial nitric oxide synthase (eNOS) cofactor tetrahydrobiopterin (BH4). L-Sepiapterin improves endothelial dysfunction in small mesenteric arteries from db/db mice, and induces angiogenesis. L-Sepiapterin inhibits cell proliferation and migration of ovarian cancer cells via down-regulation of $p70^{S6K}$-dependent VEGFR-2 expression[1][2].
IC_{50} & Target	Human Endogenous Metabolite

In Vitro

L-Sepiapterin (Sepiapterin) (0.1-10 μM; 24 hpurs) Iinduces cell proliferation in a dose-dependent manner[1].
L-Sepiapterin (1-50 μM; 20 minutes) significantly inhibits the phosphorylation of VEGF-A-induced (50 ng/ml) $p70^{S6K}$[1].
L-Sepiapterin inhibits VEGF-A-induced cell proliferation and migration through NO-independent mechanism[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	SKOV-3 cells
Concentration:	0.1, 1, 10 μM
Incubation Time:	24 hours
Result:	Induced cell proliferation in a dose-dependent manner.

In Vivo

Sepiapterin (10 mg/kg; p.o. (powder chow); daily for or 8 weeks) significantly improves the relaxation to Ach in small mesenteric arteries (SMA) from db/db mice[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male C57BL/KsJ diabetic mice (db/db)[2]
Dosage:	10 mg/kg
Administration:	P.o. (powder chow); daily for or 8 weeks
Result:	Significantly improved the relaxation to Ach in SMA from db/db mice.

REFERENCES

[1]. Pannirselvam M, et al. Chronic oral supplementation with sepiapterin prevents endothelial dysfunction and oxidative stress in small mesenteric arteries from diabetic (db/db) mice. Br J Pharmacol. 2003;140(4):701-706.

[2]. Cho YR, et al. Sepiapterin inhibits cell proliferation and migration of ovarian cancer cells via down-regulation of p70S6K-dependent VEGFR-2 expression. Oncol Rep. 2011;26(4):861-867.

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