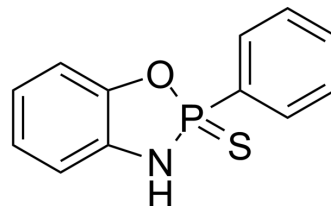


FW1256

Cat. No.:	HY-121955		
CAS No.:	117089-08-4		
Molecular Formula:	C ₁₂ H ₁₀ NOPS		
Molecular Weight:	247.25		
Target:	NF-κB; Apoptosis		
Pathway:	NF-κB; Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 250 mg/mL (1011.12 mM)
 * "≥" means soluble, but saturation unknown.

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.0445 mL	20.2224 mL	40.4449 mL
	5 mM	0.8089 mL	4.0445 mL	8.0890 mL
	10 mM	0.4044 mL	2.0222 mL	4.0445 mL

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

BIOLOGICAL ACTIVITY

Description

FW1256 is a phenyl analogue and a slow-releasing hydrogen sulfide (H₂S) donor. FW1256 inhibits NF-κB activity and induces cell apoptosis. FW1256 exerts potent anti-inflammatory effects and has the potential for cancer and cardiovascular disease treatment^{[1][2]}.

In Vitro

FW1256 (200 μM; 24.5 hours; AW264.7 cells) treatment significantly reduces IL-1β, COX-2 and iNOS mRNA and protein in LPS-stimulated RAW264.7 macrophages^[1].

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FW1256 concentration dependently decreases TNF-α (IC₅₀ of 61.2 μM), IL-6 (IC₅₀ of 11.7 μM), PGE2 (IC₅₀ of 25.5 μM) and NO (IC₅₀ of 34.6 μM) generation in LPS-stimulated RAW264.7 macrophages and bone marrow-derived macrophages (BMDMs) (IC₅₀s of 414.9 μM, 300.2 μM, 4 μM and 9.5 μM for TNF-α, IL-6, PGE2 and NO, respectively)^[1].

FW1256 decreases NF-κB activation as evidenced by reduced cytosolic phospho-IκBα levels and reduces nuclear p65 levels in LPS-stimulated RAW264.7 macrophages treated with FW1256^[1].

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

RT-PCR ^[1]	
Cell Line:	RAW264.7 cells
Concentration:	200 μ M
Incubation Time:	24.5 hours
Result:	Significantly reduced IL-1 β , COX-2 and iNOS mRNA in LPS-stimulated RAW264.7 macrophages..
Western Blot Analysis ^[1]	
Cell Line:	RAW264.7 cells
Concentration:	200 μ M
Incubation Time:	24.5 hours
Result:	Significantly reduced IL-1 β , COX-2 and iNOS protein in LPS-stimulated RAW264.7 macrophages..
In Vivo	
FW1256 (100 mg/kg; intraperitoneal injection; male C57BL/6 mice) treatment reduces IL-1 β , TNF α , nitrate/nitrite and PGE2 levels in LPS-treated mice ^[1] .	
MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
Animal Model:	Male C57BL/6 mice (20-25 g, 6-10 weeks) injected with E. coli lipopolysaccharide (LPS) ^[1]
Dosage:	100 mg/kg
Administration:	Intraperitoneal injection
Result:	Reduced IL-1 β , TNF α , nitrate/nitrite and PGE2 levels in LPS-treated mice.

CUSTOMER VALIDATION

- Am J Transl Res. 2021 May 15;13(5):4007-4025.

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REFERENCES

[1]. Huang CW, et al. A novel slow-releasing hydrogen sulfide donor, FW1256, exerts anti-inflammatory effects in mouse macrophages and in vivo. Pharmacol Res. 2016 Nov;113(Pt A):533-546.

[2]. Feng W, et al. Discovery of New H₂S Releasing Phosphordithioates and 2,3-Dihydro-2-phenyl-2-sulfanylenebenzo[d][1,3,2]oxazaphospholes with Improved Antiproliferative Activity. J Med Chem. 2015 Aug 27;58(16):6456-80.

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

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