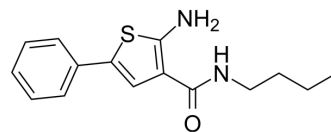


ThioLox

Cat. No.:	HY-139196		
CAS No.:	1202193-89-2		
Molecular Formula:	C ₁₅ H ₁₈ N ₂ OS		
Molecular Weight:	274.38		
Target:	Lipoxygenase		
Pathway:	Metabolic Enzyme/Protease		
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 : 100 mg/mL (364.46 mM; ultrasonic and warming and heat to 60°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.6446 mL	18.2229 mL	36.4458 mL
		5 mM	0.7289 mL	3.6446 mL	7.2892 mL
10 mM		0.3645 mL	1.8223 mL	3.6446 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (9.11 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.5 mg/mL (9.11 mM); Suspended solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	ThioLox is a competitive 15-lipoxygenase-1 (15-LOX-1) inhibitor with a K _i of 3.30 μM. ThioLox shows anti-inflammatory and neuroprotective properties ^[1] .
IC₅₀ & Target	Ki: 3.30 μM (15-LOX-1) ^[1]
In Vitro	ThioLox shows competitive inhibition thus indicating non-covalent interaction with the active site of the 15-LOX-1 ^[1] . ThioLox (50 μM; 24 h) inhibits interleukin (IL-1β, IL-6, IL-8, IL-12b, TNFα and iNOS) expression in precision-cut lung slices (PCLS) ^[1] . ThioLox (10 μM; 16 h) prevent lipid peroxidation and mitochondrial superoxide formation in neuronal cells ^[1] . ThioLox (5-20 μM; 14-16 h) protects HT-22 cells against glutamate toxicity and significantly reduces neuronal cell death ^[1] .

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

RT-PCR^[1]

Cell Line:	Precision-cut lung slices (PCLS)
Concentration:	1, 5, 10, 25 and 50 μ M
Incubation Time:	In combination with 10 μ M linoleic acid for 20 h and stimulated with 10 ng/mL LPS for the last 4 h.
Result:	Provided almost 50% inhibition of the expression of the pro-inflammatory genes IL-1 β , IL-6, IL-8, IL-12b, TNF α and iNOS at 50 μ M.

Cell Viability Assay^[1]

Cell Line:	Neuronal HT-22 cells
Concentration:	5, 10 and 20 μ M
Incubation Time:	14-16 h
Result:	Significantly reduced neuronal cell death against glutamate toxicity.

In Vivo

ThioLox has a logP of 3 and shows values that comply very well with the BBB permeability^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Eleftheriadis N, et al. Design of a novel thiophene inhibitor of 15-lipoxygenase-1 with both anti-inflammatory and neuroprotective properties. Eur J Med Chem. 2016 Oct 21;122:786-801.

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

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