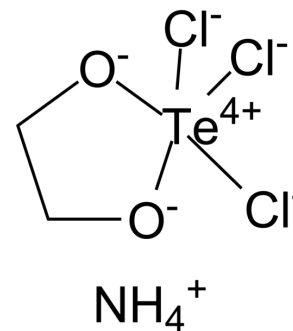


Ossirene

Cat. No.:	HY-101019
CAS No.:	106566-58-9
Molecular Formula:	C ₂ H ₈ Cl ₃ NO ₂ Te
Molecular Weight:	312.05
Target:	Interleukin Related; Caspase
Pathway:	Immunology/Inflammation; Apoptosis
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 12.5 mg/mL (40.06 mM); ultrasonic and warming and heat to 80°C				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	3.2046 mL	16.0231 mL	32.0461 mL
		5 mM	0.6409 mL	3.2046 mL	6.4092 mL
	10 mM	0.3205 mL	1.6023 mL	3.2046 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: 1.25 mg/mL (4.01 mM); Suspended solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 1.25 mg/mL (4.01 mM); Suspended solution; Need ultrasonic				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.25 mg/mL (4.01 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Ossirene (AS101), an immunomodulatory tellurium compound, is a potent IL-1β inhibitor ^[1] . Ossirene abolishes phosphorylation of STAT3 by inhibiting IL-10. Ossirene potently inhibits Caspase-1 and is used for the autoimmune diseases and certain malignancies ^{[2][3][4]} .		
IC ₅₀ & Target	IL-1β	IL-10	Caspase-1
In Vitro	Ossirene (AS101; 1 μg/mL; for 24 hours) almost completely abrogates expression of pStat3. Ossirene may reduce expression of Bcl-2 after inhibition of Stat3 activation via IL-10 inhibition ^[2] . AS101 (0.5, 5 mg/mL; 24 hours) inhibits IL-1β-induced mRNA expression of inflammatory mediators in the RPE in a dose-		

dependent manner. AS101 inhibits IL-1 β -induced mRNA expression and protein production of IL-6 and IL-8 in RPE cells. AS101 (5 mg/mL; 1 hour) inhibits the phosphorylation of the p65 component of the NF κ B complex activated by IL-1 β ^[1]. Ossirene (0.1, 0.5, 1, 2.5 μ g/mL) significantly decreases B16 melanoma, stomach adenocarcinoma, and human glioblastoma multiforme (GBM) cells proliferation^[2].

AS101 (0.5 μ g/mL; for 24 hours) sensitizes GBM tumor cells to paclitaxel in an IL-10-dependent manner^[2].

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

Western Blot Analysis^[2]

Cell Line:	B16 melanoma cells
Concentration:	1 μ g/mL
Incubation Time:	For 24 hours
Result:	Almost completely abrogated expression of pStat3.

RT-PCR^[1]

Cell Line:	ARPE19 cells
Concentration:	0.5, 5 mg/mL
Incubation Time:	24 hours
Result:	Inhibited IL-1 β -induced mRNA expression of inflammatory mediators in the RPE in a dose-dependent manner.

In Vivo

Ossirene (AS101; 0.5 mg/kg/day; IP; 25 days) sensitizes GBM tumors to paclitaxel via inhibition of IL-10, resulting in increased survival^[2].

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

Animal Model:	SCID mice with GBM cells ^[2]
Dosage:	0.5 mg/kg
Administration:	IP; daily; 25 days
Result:	Significantly increased survival of GBM tumor-bearing mice.

CUSTOMER VALIDATION

- Cell Death Dis. 2020 Nov 3;11(11):947.

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REFERENCES

[1]. Sredni B, et al. Ammonium trichloro(dioxoethylene-o,o')tellurate (AS101) sensitizes tumors to chemotherapy by inhibiting the tumor interleukin 10 autocrine loop. Cancer Res. 2004 Mar 1;64(5):1843-52.

[2]. Yona Kalechman, et al. Inhibition of interleukin-10 by the Immunomodulator AS101 Reduces Mesangial Cell Proliferation in Experimental Mesangioproliferative Glomerulonephritis: Association With Dephosphorylation of STAT3. J Biol Chem. 2004 Jun 4;279(23):24

[3]. Diamond Ling, et al. The Tellurium Redox Immunomodulating Compound AS101 Inhibits IL-1 β -activated Inflammation in the Human Retinal Pigment Epithelium. Br J Ophthalmol. 2013 Jul;97(7):934-8.

[4]. Yafit Hachmo, et al. The Small Tellurium Compound AS101 Ameliorates Rat Crescentic Glomerulonephritis: Association With Inhibition of Macrophage Caspase-1 Activity via Very Late Antigen-4 Inactivation. Front Immunol. 2017 Mar 7;8:240.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA