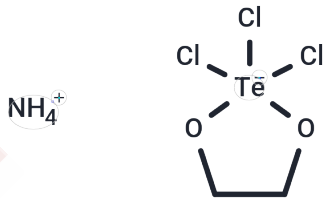
Data Sheet (Cat.No.T6761)

TargetMol

Ossirene

Chemical Properties



CAS No. : 106566-58-9

Formula: C2H4Cl3O2Te·H4N

Molecular Weight: 312.05

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Ossirene (AS101), a potent in vitro and in vivo immunomodulator, is a novel inhibitor of IL-1beta converting enzyme.
Targets(IC50)	Caspase,IL Receptor,Interleukin
In vitro	Treatment of caspase-1 (interleukin-1 [IL-1] converting enzyme [ICE]) with Ossirene inhibits its enzymatic activity in a dose-dependent manner. Moreover, Ossirene treatment causes a significant reduction in the active form of IL-18 and IL-1 in peripheral blood mononuclear cells (PBMC) and in human HaCat keratinocytes. The inhibitory effect of Ossirene does not involve nitric oxide (NO) or interferon- (IFN-), two possible regulators of IL-18 production, and does not occur at the mRNA level. It may exert effects through a posttranscriptional mechanism[1]. Ossirene induced SIRT1 expression in a dose dependent manner in three different cell lines, HEK293, HL-60 and Rin-5f. Incubation of HEK293 and HL-60 cell lines with Ossirene (0.1-2.5μg/ml) resulted in a dose dependent reduction in PPARγ protein expression relative to the control cells, and the reduction of PPARγ expression is in parallel to increased SIRT1 expression[2].
In vivo	Ossirene downregulates IL-18 and IL-1 serum levels in a mouse model of lipopolysaccharide (LPS)-induced sepsis, resulting in increased survival. It has also been shown to be protective against lethal and sublethal effects of irradiation and chemotherapy. In a model of cecal ligation and puncture (CLP)-induced sepsis in mice, Ossirene also exerted beneficial effects[1]. Ossirene treated rats showed a large increase in SIRT1 protein levels in the liver and kidney extracts of rats treated with Ossirene. Ossirene prevents development of insulin resistance in vivo. Ossirene affects SIRT1 related metabolic pathways by changing the insulin levels. Ossirene treatment prevents hyperglycemia associated with T2D(type 2 diabetes) and some of the symptoms of the disease in the HFD(high fat diet)+STZ(Streptozotocin) rat model[2].
Cell Research	In vitro, PBMCs were first treated with various concentrations of AS101, and after 1 h SAC (10-3 v/v) was added. After 24 h, supernatants were collected and evaluated for cytokine content. (Only for Reference)

Solubility Information

Solubility	DMSO: 5.63 mg/mL (18.04 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0641 mL	0.3205 mL	0.6409 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Brodsky M, et al. J Interferon Cytokine Res. 2007, 27(6):453-62.
Wei Wei,Jia Li,Fan Liu, et al. Alteration of intestinal microecology by oral antibiotics promotes oral squamous cell carcinoma development. Molecular Immunology. 2022 Jul 6;149:94-106
Halperin-Sheinfeld M, et al. Aging (Albany NY). 2012, 4(6):436-47.