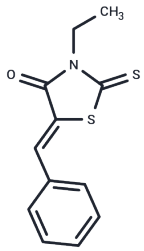
Data Sheet (Cat.No.T5822)

TargetMol

BTR-1

Chemical Properties



CAS No. : 18331-34-5

Formula: C12H11NOS2

Molecular Weight: 249.35

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	5-Benzylidene-3-ethyl rhodanine(BTR-1 (5-Benzylidene-3-ethyl rhodanine)) is an active anti-cancer agent. BTR-1 activates apoptosis and induces cell death.
Targets(IC50)	Apoptosis
In vitro	5-isopropylidiene derivatives of 3-dimethyl-2-thio-hydantoin (ITH-1), 3-ethyl-2-thio-2,4-oxazolidinedione (ITO-1), and 5-Benzylidene-3-ethyl rhodanine(BTR-1), and have tested their chemotherapeutic properties. All three compounds induced cytotoxicity in a time- and concentration-dependent manner on leukemic cell line, CEM. Among the compounds tested, BTR-1 was 5- to 7-fold more potent than ITH-1 and ITO-1 when compared by trypan blue and MTT assays. IC(50) value of BTR-1 was estimated to be <10μM. Both cell cycle analysis and tritiated thymidine assays revealed that BTR-1 affects DNA replication by inducing a block at S phase. BTR-1 treatment led to increased level of ROS production and DNA strand breaks suggesting activation of apoptosis for induction of cell death.

Solubility Information

Solubility	DMSO: 25 mg/mL (100.26 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (8.02 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.0104 mL	20.0521 mL	40.1043 mL
5 mM	0.8021 mL	4.0104 mL	8.0209 mL
10 mM	0.401 mL	2.0052 mL	4.0104 mL
50 mM	0.0802 mL	0.401 mL	0.8021 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

Moorthy B T , Ravi S , Srivastava M , et al. Novel rhodanine derivatives induce growth inhibition followed by apoptosis[J]. Bioorganic and Medicinal Chemistry Letters, 2010, 20(21):6297-6301.