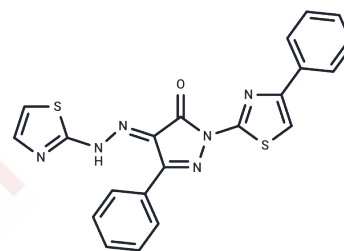


## BTSA1

## Chemical Properties

CAS No. :	314761-14-3
Formula:	C <sub>21</sub> H <sub>14</sub> N <sub>6</sub> O <sub>2</sub> S
Molecular Weight:	430.51
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	BTSA1 is a BAX activator that binds with high affinity and specificity to the N-terminal activation site and induces conformational changes to BAX leading to BAX-mediated apoptosis.
Targets(IC50)	Apoptosis, Bcl-2 Family
In vitro	BTSA1 has no capacity to directly activate the pro-apoptotic homolog BAK. BTSA1 treatment potently and dose-responsively induces membrane translocation of recombinant soluble BAX to the mitochondrial membrane, which is followed by induction of BAX oligomerization. BTSA1-induced BAX activation promotes apoptosis in cancer cells. BTSA1 reduces the viability of all AML cell lines in a dose-dependent manner with IC <sub>50</sub> values ranged between 1 and 4 μM, which leads to complete effect within 24 hr treatment. It induces dose-dependent caspase-3/7 activation in all five AML cell lines[1].
In vivo	BTSA1 potently suppresses human acute myeloid leukemia (AML) xenografts and increases host survival without toxicity. It is well-tolerated in mice with no toxic effects on healthy hematopoiesis, including healthy stem cell-enriched (LSK) cells, common myeloid progenitors, granulocyte-monocyte progenitors, and megakaryocyte-erythrocyte progenitors. BTSA1 has a substantial half-life in mouse plasma (T <sub>1/2</sub> = 15 hr) and oral bioavailability (%F = 51), while a 10 mg/kg dose reaches sufficient levels (~15 μM) of BTSA1 to induce BAX activation and apoptosis in leukemia cells. Thus, BTSA1 is orally bioavailable with excellent pharmacokinetics, has significant anti-tumor activity in leukemia xenografts by promoting apoptosis, and at therapeutically effective doses it does not show any detectable toxicity in the hematopoietic system or other tissues[1].

## Solubility Information

Solubility	DMSO: 60 mg/mL (139.37 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.3228 mL	11.6141 mL	23.2283 mL
5 mM	0.4646 mL	2.3228 mL	4.6457 mL
10 mM	0.2323 mL	1.1614 mL	2.3228 mL
50 mM	0.0465 mL	0.2323 mL	0.4646 mL

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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

Reyna DE, et al. Direct Activation of BAX by BTS1 Overcomes Apoptosis Resistance in Acute Myeloid Leukemia. *Cancer Cell*. 2017 Oct 9;32(4):490-505.e10.

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