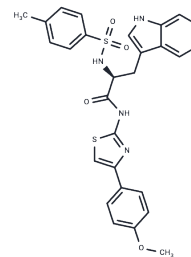


BC-DXI-843

## Chemical Properties

CAS No. : 2421117-98-6  
 Formula: C<sub>28</sub>H<sub>26</sub>N<sub>4</sub>O<sub>4</sub>S<sub>2</sub>  
 Molecular Weight: 546.66  
 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	BC-DXI-843 is inhibitor of AIMP2-DX2, and is potential for development of novel therapeutics targeting AIMP2-DX2 in lung cancer.
Targets(IC50)	Others
In vitro	Optimization of hit BC-DXI-04 (IC <sub>50</sub> = 40.1 μM) provided new potent sulfonamide based AIMP2-DX2 inhibitors. Among these, BC-DXI-843 showed improved inhibition against AIMP2-DX2 (IC <sub>50</sub> = 0.92 μM) with more than 100-fold selectivity over AIMP2 in a luciferase assay. Several binding assays indicated that this compound effectively induces cancer cell apoptosis by specifically interrupting the interaction between DX2 and HSP70, which leads to the degradation of DX2 via Siah1-mediated ubiquitination.
In vivo	BC-DXI-843 demonstrated in vivo efficacy in a tumor xenograft mouse model (H460 cells) at a dosage of 50 mg/kg, suggesting it as a promising lead for development of novel therapeutics targeting AIMP2-DX2 in lung cancer.

## Solubility Information

Solubility	DMSO: 245 mg/mL (448.18 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: 5 mg/mL (9.15 mM), Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.8293 mL	9.1465 mL	18.2929 mL
5 mM	0.3659 mL	1.8293 mL	3.6586 mL
10 mM	0.1829 mL	0.9146 mL	1.8293 mL
50 mM	0.0366 mL	0.1829 mL	0.3659 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

Aneesh Sivaraman, Dae Gyu Kim, Deepak Bhattarai, et al. Synthesis and Structure-Activity Relationships of Arylsulfonamides as AIMP2-DX2 Inhibitors for the Development of a Novel Anticancer Therapy. J Med Chem. 2020 May 28;63(10):5139-5158.

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