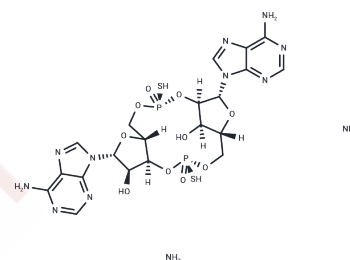


## ADU-S100 ammonium salt

### Chemical Properties

CAS No. :	1638750-96-5
Formula:	C <sub>20</sub> H <sub>30</sub> N <sub>12</sub> O <sub>10</sub> P <sub>2</sub> S <sub>2</sub>
Molecular Weight:	724.6
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



### Biological Description

Description	ADU-S100 ammonium salt is an activator of stimulator of interferon genes (STING). ADU-S100 ammonium salt leads to potent and systemic tumor regression and immunity.
Targets(IC50)	STING
In vitro	<p><b>METHODS:</b> BMDCs were treated with free ADU-S100 (0.5 µg/mL) or liposomal ADU-S100 (0.1 µg/mL) for 24 hours, and IFNβ (A) and TNFα (B) levels in the cell culture medium were measured using ELISA.</p> <p><b>RESULTS</b> ADU-S100 enhanced the production of TNFα and IFNβ in BMDCs. [1]</p> <p><b>METHODS:</b> Mouse cDC2 and human cDC2 were cultured in 12.5-200 µM ADU-S100 for 24 hours, and the effects of ADU-S100 on cDC2 were observed.</p> <p><b>RESULTS</b> 25 µM ADU-S100 increased the expression of Tim-3 on DC, showing a significant upregulation of Tim-3. [3]</p>
In vivo	<p><b>METHODS:</b> After a 50 µg bolus injection of ADU-S100 on day 14 after intracranial implantation of GL261 mice, brain infiltrating leukocytes (BILs) were analyzed in detail by flow cytometry using a panel of 13 immune markers.</p> <p><b>RESULTS</b> Three days after treatment of ADU-S100, suppression of microglia, CD4+ and CD8+ T cell populations, and infiltration of NK and CD11b/Gr1 inflammatory immune cells were observed, and 7 days after treatment, the proportion of T cells recovered and increased compared to baseline levels. CD45-negative cells decreased shortly after treatment. [2]</p> <p><b>METHODS:</b> B16F1-OVA cells/100 µL PBS were injected into the right groin of C57BL/6 mice, and tumor-bearing mice were treated intratumorally with saline and 50 µg ADU-S100 every 2 days during the first week. Then, the dose of S100 was reduced to 30 µg, while the frequency of administration remained unchanged.</p> <p><b>RESULTS</b> Mice treated with ADU-S100 lost weight and had smaller tumors. [3]</p>

### Solubility Information

Solubility	H <sub>2</sub> O: 5 mg/mL (6.9 mM), Sonication is recommended. DMSO: 12 mg/mL (16.56 mM), Sonication and heating are recommended. ( < 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.3801 mL	6.9004 mL	13.8007 mL
5 mM	0.276 mL	1.3801 mL	2.7601 mL
10 mM	0.138 mL	0.690 mL	1.3801 mL
50 mM	0.0276 mL	0.138 mL	0.276 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

Ji N, et al. Liposomal Delivery of MIW815 (ADU-S100) for Potentiated STING Activation. *Pharmaceutics*. 2023 Feb 14; 15(2):638.

Berger G, et al. STING activation promotes robust immune response and NK cell-mediated tumor regression in glioblastoma models. *Proc Natl Acad Sci U S A*. 2022 Jul 12;119(28):e2111003119.

Luo J, et al. Blocking Tim-3 enhances the anti-tumor immunity of STING agonist ADU-S100 by unleashing CD4+ T cells through regulating type 2 conventional dendritic cells. *Theranostics*. 2023 Sep 4;13(14):4836-4857.

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