

## BzATP triethylammonium salt

## Chemical Properties

CAS No. : 112898-15-4

Formula: C<sub>30</sub>H<sub>39</sub>N<sub>6</sub>O<sub>15</sub>P<sub>3</sub>

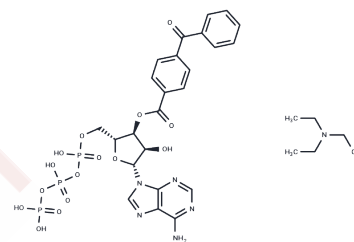
Molecular Weight: 816.59

Storage:

Store at low temperature, Keep away from moisture,  
Store under nitrogen

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   | BzATP triethylammonium salt is a P2X7 receptor agonist.  |
| Targets(IC50) | P2X Receptor   |
| In vitro      | <p><b>METHODS:</b> Glioma cell lines U87 and U251 were treated with BzATP triethylammonium salt (5-1000 <math>\mu</math>M) for 2-72 h. Cell proliferation was detected by MTT assay.</p> <p><b>RESULTS:</b> Proliferation of glioma cell lines U87 and U251 was significantly increased in the presence of BzATP. the peak fine cell proliferation of both U87 and U251 cell lines was 100 <math>\mu</math>M BzATP, and the optimal incubation time was 24 h for both cell lines [1].</p> <p><b>METHODS:</b> Retinal ganglion cells were treated with BzATP triethylammonium salt (50 <math>\mu</math>M) for 2 min and intracellular Ca<sup>2+</sup> levels were measured.</p> <p><b>RESULTS:</b> The P2X7 agonist BzATP resulted in a rapid increase in intracellular Ca<sup>2+</sup> and the level remained elevated for 2 min after agonist application. More than 80% of the examined cells responded strongly to BzATP. [2]</p> |
| In vivo       | <p><b>METHODS:</b> To investigate the effects on whole-body energy metabolism, BzATP triethylammonium salt (1 mg/kg) was administered intraperitoneally to C57BL/6j mice once daily for seven days.</p> <p><b>RESULTS:</b> BzATP triethylammonium salt increased metabolic rate and O<sub>2</sub> consumption while decreasing respiratory rate and upregulating NADPH oxidase 2 in gastrocnemius and tibialis anterior muscle. The findings suggest that activation of P2X7 has a significant effect on energy homeostasis and muscle metabolism. [3]</p>   |

## Solubility Information

|                     |  |
|---------------------|--|
| Solubility          | H <sub>2</sub> O: 50 mg/mL (61.23 mM), Sonication is recommended.<br>DMSO: 50 mg/mL (61.23 mM), Sonication is recommended.<br>(< 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 (2.45 mM), Sonication is recommended.<br><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</i> |

## A DRUG SCREENING EXPERT

|                     |   |
|---------------------|---|
| In vivo Formulation | <i>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

|       | 1mg       | 5mg       | 10mg      |
|-------|-----------|-----------|-----------|
| 1 mM  | 1.2246 mL | 6.123 mL  | 12.246 mL |
| 5 mM  | 0.2449 mL | 1.2246 mL | 2.4492 mL |
| 10 mM | 0.1225 mL | 0.6123 mL | 1.2246 mL |
| 50 mM | 0.0245 mL | 0.1225 mL | 0.2449 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

Ji Z, et al. Involvement of P2X7 Receptor in Proliferation and Migration of Human Glioma Cells. *Biomed Res Int.* 2018 Jan 9;2018:8591397.

Zhang X, et al. Stimulation of P2X7 receptors elevates Ca<sup>2+</sup> and kills retinal ganglion cells. *Invest Ophthalmol Vis Sci.* 2005 Jun;46(6):2183-91.

Giacovazzo G, et al. Stimulation of P2X7 Enhances Whole Body Energy Metabolism in Mice. *Front Cell Neurosci.* 2019 Aug 21;13:390.

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