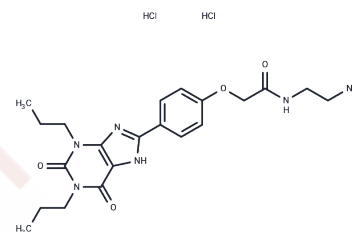


## Xanthine amine congener dihydrochloride

## Chemical Properties

|                   |   |
|-------------------|---|
| CAS No. :         | 1962928-23-9  |
| Formula:          | C <sub>21</sub> H <sub>30</sub> Cl <sub>2</sub> N <sub>6</sub> O <sub>4</sub>                                       |
| Molecular Weight: | 501.41  |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year<br>Actual storage temperature shall be subject to the COA. |



## Biological Description

|                            |   |
|----------------------------|---|
| Description                | Xanthine amine congener dihydrochloride (XAC dihydrochloride), a potent antagonist for both Adenosine A1 and A2 receptors with IC <sub>50</sub> values of 1.8 nM for A1 and 114 nM for A2, also functions as a convulsant agent in mouse models.  |
| Targets(IC <sub>50</sub> ) | Others, Adenosine Receptor  |
| In vivo                    | Xanthine amine congener dihydrochloride (XAC) demonstrates greater potency as a convulsant agent compared to caffeine or theophylline when administered through infusion at a dosage of 39.8 mg/kg. However, XAC exhibits no convulsant effects when delivered via intraperitoneal (i.p.) injection, with the seizure threshold exceeding 1000 mg/kg. This observation is supported by studies conducted on mice, utilizing a single infusion injection of 39.8 mg/kg, thereby positioning XAC as a more potent convulsant than either caffeine or theophylline under specified conditions. [1] |

## Preparing Stock Solutions

|       | 1mg       | 5mg       | 10mg       |
|-------|-----------|-----------|------------|
| 1 mM  | 1.9944 mL | 9.9719 mL | 19.9438 mL |
| 5 mM  | 0.3989 mL | 1.9944 mL | 3.9888 mL  |
| 10 mM | 0.1994 mL | 0.9972 mL | 1.9944 mL  |
| 50 mM | 0.0399 mL | 0.1994 mL | 0.3989 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

P F Morgan, et al. Potent Convulsant Actions of the Adenosine Receptor Antagonist, Xanthine Amine Congener (XAC). Life Sci. 1989;45(8):719-28

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