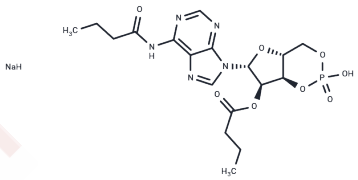
# Data Sheet (Cat.No.T1418)

TargetMol

## Bucladesine sodium

### Chemical Properties



CAS No. : 16980-89-5

Formula: C18H23N5NaO8P

Molecular Weight: 491.37

Storage: Store at low temperature,Keep away from moisture,
Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | Bucladesine sodium (DC2797) is a cAMP analog with cell-permeable properties. Bucladesine sodium is also a cAMP-dependent protein kinase (PKA) activator and a phosphodiester (PDE) inhibitor. Bucladesine sodium has anti-inflammatory activity. |
| Targets(IC50) | PDE,PKA |
| In vitro | **METHODS**: Human eosinophil EoL-1 cells were treated with Bucladesine sodium (10-100 μM) for 8 days and activity was measured using PKA assay.<br>**RESULTS**: Proliferation of EoL-1 cells treated with Bucladesine sodium increased in a time-dependent manner. [1]<br>**METHODS**: PC12 cells were treated with Bucladesine sodium (1 mM) for 72 h. TNF-α levels were measured by ELISA assay.<br>**RESULTS**: Bucladesine sodium increased the activity of PKA. [2] |
| In vivo | **METHODS**: To study the anti-inflammatory activity in vivo, Bucladesine sodium (0.24-0.7 μg/kg) was administered intraperitoneally to a mouse model of copper pine demyelination once daily for seven days.<br>**RESULTS**: Bucladesine had a protective effect on myelin formation. Enhanced intracellular cAMP prevented demyelination and exerted anti-inflammatory and anti-apoptotic properties in a mouse model of copper pine demyelination. [3]<br>**METHODS**: To investigate the effects on liver injury, Bucladesine sodium (0.5-500 mg/kg) was intraperitoneally injected into C57BL/6J jcl mice, and liver injury was induced by the intravenous injection of rTNF-α (1.0 μg/kg) and intraperitoneal injection of D-gal (500 mg/kg) after 1 h. The **RESULTS** showed that Bucladesine protected against hepatic injury in C57BL/6J jcl mice.<br>**RESULTS**: Bucladesine protected mice from TNF-α/D-gal-induced liver injury. Bucladesine significantly enhanced the expression of Hsp70 in hepatocytes of D-gal/TNFα-injected mice, which was closely related to the inhibition of liver injury. [4] |
| Animal Research | Animal: Mice. Formulation: water/DMSO (9:1). Dosages: 600 nM. Administration: i.p. |

### Solubility Information

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|---|---|
| Solubility | H2O: 200 mg/mL (407.03 mM),Sonication is recommended.<br>DMSO: 144 mg/mL (293.06 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: 4 mg/mL (8.14 mM),Sonication is recommended.<br>*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.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.0351 mL | 10.1756 mL | 20.3513 mL |
| 5 mM | 0.407 mL | 2.0351 mL | 4.0703 mL |
| 10 mM | 0.2035 mL | 1.0176 mL | 2.0351 mL |
| 50 mM | 0.0407 mL | 0.2035 mL | 0.407 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

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