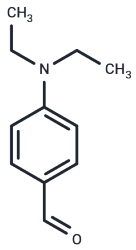
# Data Sheet (Cat.No.T10140)

TargetMol

## 4-Diethylaminobenzaldehyde

### Chemical Properties



CAS No. : 120-21-8

Formula: C11H15NO

Molecular Weight: 177.24

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 | 4-Diethylaminobenzaldehyde, a reversible aldehyde dehydrogenase (ALDH) inhibitor (Ki: 4 nM for ALDH1), exhibits a potent anti-androgenic effect (IC50: 1.71 μM). |
| Targets(IC50) | Dehydrogenase |
| In vitro | 4-Diethylaminobenzaldehyde (DEAB) is a reversible competitive inhibitor of ALDH1, with a Ki of 4 nM (competitive with the aldehyde substrate), and it irreversibly inactivates ALDH7A1 by forming a stable, covalent acyl-enzyme species[1]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 31.25 mg/mL (176.31 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: 1 mg/mL (5.64 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 | 5.6421 mL | 28.2103 mL | 56.4207 mL |
| 5 mM | 1.1284 mL | 5.6421 mL | 11.2841 mL |
| 10 mM | 0.5642 mL | 2.821 mL | 5.6421 mL |
| 50 mM | 0.1128 mL | 0.5642 mL | 1.1284 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

Luo M, et al. Diethylaminobenzaldehyde is a covalent, irreversible inactivator of ALDH7A1. ACS Chem Biol. 2015 Mar 20;10(3):693-7.

Araki N, et al. Screening for androgen receptor activities in 253 industrial chemicals by in vitro reporter gene assays using AR-EcoScreen cells. Toxicol In Vitro. 2005 Sep;19(6):831-42.