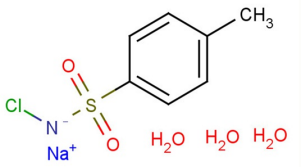
# Data Sheet (Cat.No.T19587)

TargetMol
A DRUG SCREENING EXPERT

Tosylchloramide sodium trihydrate

## Chemical Properties



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| CAS No.: | 7080-50-4 |
| Formula: | C7H13ClNNaO5S |
| Molecular Weight: | 281.69 |
| Appearance: | N/A |
| Storage: | 0-4℃ for short term (days to weeks), or -20℃ for long term (months). |

## Biological Description

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| Description | Tosylchloramide sodium trihydrate is an agent of disinfectant. It is also used as a biocide in air fresheners and deodorants. |
| Targets($IC_{50}$) | Others: None |
| In vitro | After tosylchloramide treatment, Gram-positive growth is reduced by 95% to 100%, regardless of dose, with or without serum. E coli (gram-negative; with/without serum) is reduced 94% to 100% at antiseptic concentrations of 300 and 400 ppm. At 200 ppm, E coli growth is fully inhibited without serum present and by 50% with serum. At 100 and 200 ppm, cell viability remains greater than 90% under all experimental conditions. A 300-ppm, 3-minute exposure to tosylchloramide results in cell viability of up to 70%, with longer exposures producing lower viabilities. The serum does not affect cell viability in any condition [1]. |
| In vivo | In the rat tissues, A dose-dependently significant DNA damage and inflammation is histopathologically noted around the terminal airways of the lung in both male and female rats [2]. The 24-h exposure to 50 mg/L of chloramine-T is toxic for crayfish and leads to substantial loss of energy that became apparent during subsequently conducted physical stress [3]. Tosylchloramide may potentiate the toxicity of many xenobiotics via metabolic activation and/or accumulation of reactive metabolites. The activities of CYP2E1, CYP1A1/2 CYP2B1/2, CYP3A4, and CYP4A1/2 enzymes significantly increase after treatment with 2.5, 5, and 10 mg/kg bw/day tosylchloramide, in a dose-dependent manner. This effect is not observed after tosylchloramide treatment at a dose of 1.25 mg/kg bw/day [4]. |

## Solubility Information

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| Solubility | < 1 mg/ml refers to the product slightly soluble or insoluble |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.55 mL | 17.75 mL | 35.5 mL |
| 5 mM | 0.71 mL | 3.55 mL | 7.1 mL |
| 10 mM | 0.355 mL | 1.775 mL | 3.55 mL |
| 50 mM | 0.071 mL | 0.355 mL | 0.71 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Kloth LC, et al. Bactericidal and cytotoxic effects of chloramine-T on wound pathogens and human fibroblasts in vitro. Adv Skin Wound Care. 2007 Jun;20(6):331-45.
2. Shim I, et al. Inhalation exposure to chloramine T induces DNA damage and inflammation in lung of Sprague-Dawley rats. J Toxicol Sci. 2013;38(6):937-46.
3. Kuklina I, et al. Investigation of chloramine-T impact on crayfish Astacus leptodactylus (Esch., 1823) cardiac activity. Environ Sci Pollut Res Int. 2014 Sep;21(17):10262-9.
4. Martínez MA, et al. Induction of cytochrome P450-dependent mixed function oxidase activities and peroxisome proliferation by chloramine-T in male rat liver. Food Chem Toxicol. 2017 Aug;106(Pt A):86-91.



Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481