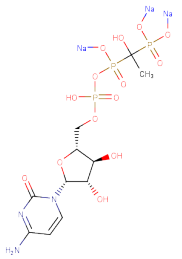
# Data Sheet (Cat.No.T11957)

TargetMol

## MBC-11 trisodium

### Chemical Properties



CAS No. : 387877-45-4

Formula: C11H17N3Na3O14P3

Molecular Weight: 577.16

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

### Biological Description

| | |
|---|---|
| Description | MBC-11 trisodium has potential to treat tumor-induced bone disease (TIBD).It is a first-in-class conjugate of the bone-targeting bisphosphonate HEDP covalently linked to the antimetabolite Ara-C. |
| Targets(IC50) | Others |
| In vitro | MBC-11 decreases KAS-6/1 cell growth from approximately 56% at 10-8 M to 6% at 10-5 M[1].MBC-11 shows similar activity profiles and significantly inhibits growth of all three cell lines between 10-8 and 10-4 M. |
| In vivo | These results demonstrate that MBC-11 decreases bone tumor burden, maintains bone structure, and may increase overall survival, warranting further investigation as a treatment for tumor-induced bone disease (TIBD)[1].MBC-11 (0.04 μg/day, s.c.) has a lower incidence of bone metastases of 40% compared to those treated with PBS (90%) or 0.04 μg/day zoledronate (100%).?MBC-11 also significantly decreases bone tumor burden compared to PBS- or zoledronate-treated mice[1].?Weight gained in mice treated with up to 500 μg/day of MBC-11 is similar to the PBS treated group[1]. |

### Solubility Information

| | |
|---|---|
| Solubility | H2O: 125 mg/mL (216.58 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 1.7326 mL | 8.6631 mL | 17.3262 mL |
| 5 mM | 0.3465 mL | 1.7326 mL | 3.4652 mL |
| 10 mM | 0.1733 mL | 0.8663 mL | 1.7326 mL |
| 50 mM | 0.0347 mL | 0.1733 mL | 0.3465 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.

Reference

Reinholz MM, et al. A promising approach for treatment of tumor-induced bone diseases: utilizing bisphosphonate derivatives of nucleoside antimetabolites. Bone. 2010 Jul;47(1):12-22.
Zinnen SP, et al. First-in-Human Phase I Study of MBC-11, a Novel Bone-Targeted Cytarabine-Etidronate Conjugate in Patients with Cancer-Induced Bone Disease. Oncologist. 2019 Mar;24(3):303-e102.



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