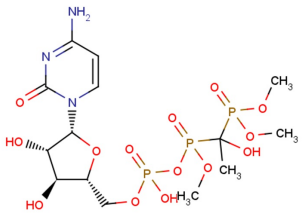
Data Sheet (Cat.No.T11957)

TargetMol
A DRUG SCREENING EXPERT

MBC-11 trisodium

Chemical Properties



CAS No.:	387877-45-4
Formula:	C11H17N3Na3O14P3
Molecular Weight:	577.15
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

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(IC_{50})	Others: None
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) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.733 mL	8.663 mL	17.327 mL
5 mM	0.347 mL	1.733 mL	3.465 mL
10 mM	0.173 mL	0.866 mL	1.733 mL
50 mM	0.035 mL	0.173 mL	0.347 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. 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.

2. 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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