

## MBC-11

## Chemical Properties

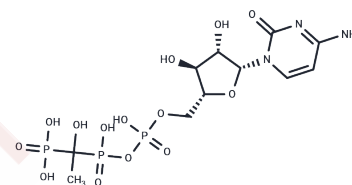
CAS No. : 332863-86-2

Formula: C<sub>11</sub>H<sub>20</sub>N<sub>3</sub>O<sub>14</sub>P<sub>3</sub>

Molecular Weight: 511.21

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

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	MBC-11 is a first-in-class conjugate of the bone-targeting bisphosphonate etidronate covalently linked to the antimetabolite cytarabine (araC), with potential to treat tumor-induced bone disease (TIBD).
Targets(IC50)	Apoptosis,Others
In vitro	In human multiple myeloma cell lines (KAS-6/1, DP-6, KP-6), MBC-11 (0.1-100 μM) significantly inhibited multiple myeloma cell proliferation in each cell line at the majority of tested concentrations[1].
In vivo	In approximately four-week-old female Balb/c mice with a breast tumor model, MBC-11 (0.04, 0.4, or 4.0 μg/day; subcutaneous injection daily from day 7 to day 21) at a dose of 0.04 μg/day had a lower incidence of bone metastases compared to those treated with PBS or 0.04 μg/day zoledronate[1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9561 mL	9.7807 mL	19.5614 mL
5 mM	0.3912 mL	1.9561 mL	3.9123 mL
10 mM	0.1956 mL	0.9781 mL	1.9561 mL
50 mM	0.0391 mL	0.1956 mL	0.3912 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

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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