

Catalog	Unit
TBI4631-10MG	10 mg
TBI4631-50MG	50 mg

### Product Details

**Formal Name:** Dichloromethylenediphosphonic acid disodium tetrahydrate

**Molecular Formula:**  $\text{CH}_2\text{Cl}_2\text{O}_6\text{P}_2 \cdot 2\text{Na} \cdot 4\text{H}_2\text{O}$

**Formula Weight:** 360.92

**CAS Number:** 88416-50-6

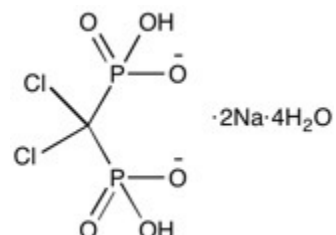
**Purity:** >98%

**Formulation:** Powder

**Solubility:** Soluble in water (up to at least 10 mg/ml)

**Storage:**  $-20^\circ\text{C}$

**Stability:**  $\geq 2$  years.



### Applications

Bis-phosphonate; Osteoclast apoptosis agent

### Functions

Clodronate is a first generation non-nitrogenous bisphosphonate drug for the prevention and treatment of osteoporosis and skeletal fractures/hypercalcemia in patients with cancer. It strongly binds to hydroxyapatite and directly reduces osteoclast activity. Clodronate is metabolized in vitro to a cytotoxic ATP analog (AppCCl<sub>2</sub>p) which inhibits ADP/ATP translocase in the mitochondrial inner membrane leading to osteoclast apoptosis.

### Application Procedures

First dissolved in water (up to at least 10 mg/ml), then diluted to aqueous buffer. Solutions in distilled water may be stored at  $-20^\circ\text{C}$  for up to 3 months.

**For research use only.**