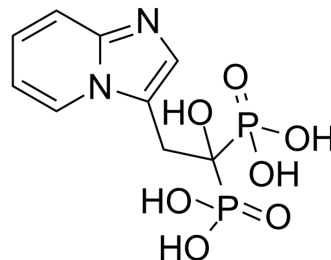


## Minodronic acid

<b>Cat. No.:</b>	HY-16322		
<b>CAS No.:</b>	180064-38-4		
<b>Molecular Formula:</b>	C <sub>9</sub> H <sub>12</sub> N <sub>2</sub> O <sub>7</sub> P <sub>2</sub>		
<b>Molecular Weight:</b>	322.15		
<b>Target:</b>	P2X Receptor; Apoptosis		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Apoptosis		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 5 mg/mL (15.52 mM; Need ultrasonic and warming)  
 DMSO : < 1 mg/mL (insoluble or slightly soluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.1041 mL	15.5207 mL	31.0414 mL
	5 mM	0.6208 mL	3.1041 mL	6.2083 mL
	10 mM	0.3104 mL	1.5521 mL	3.1041 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

1. Add each solvent one by one: PBS  
 Solubility: 2 mg/mL (6.21 mM); Clear solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

#### Description

Minodronic acid (YM-529) is a third-generation bisphosphonate that directly and indirectly prevents proliferation, induces apoptosis, and inhibits metastasis of various types of cancer cells. Minodronic acid (YM-529) is an antagonist of purinergic P2X<sub>2/3</sub> receptors involved in pain<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

P2X<sub>2/3</sub><sup>[2]</sup>

### REFERENCES

[1]. Sato K, et al. A third-generation bisphosphonate, minodronic acid (YM529), successfully prevented the growth of bladder cancer in vitro and in vivo. Br J Cancer. 2006 Nov 20;95(10):1354-61.

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[2]. Tanaka M, et al. Minodronic acid induces morphological changes in osteoclasts at bone resorption sites and reaches a level required for antagonism of purinergic P2X2/3 receptors. *J Bone Miner Metab.* 2018 Jan;36(1):54-63.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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