Minodronic acid

Cat. No.: HY-16322

CAS No.: 180064-38-4

Molecular Formula: $C_9H_{12}N_2O_7P_2$

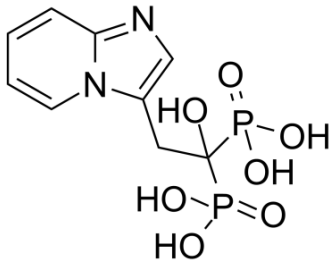
Molecular Weight: 322.15

Target: P2X Receptor; Apoptosis

Pathway: Membrane Transporter/Ion Channel; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 5 mg/mL (15.52 mM; Need ultrasonic and warming)
DMSO : < 1 mg/mL (insoluble or slightly soluble)

Preparing Stock Solutions

Concentration \ Solvent \ 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.

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 P2X2/3 receptors involved in pain[1][2].

IC_{50} & Target

P2X2/3[2]

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.

[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.

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

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