EDTA-AM

Cat. No.: HY-D1746

CAS No.: 162303-59-5

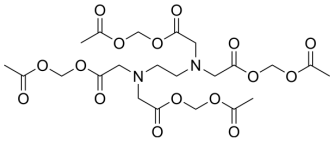
Molecular Formula: $C_{22}H_{32}N_2O_{16}$

Molecular Weight: 580.49

Target: Biochemical Assay Reagents

Pathway: Others

Storage: -20°C, protect from light, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (172.27 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7227 mL	8.6134 mL	17.2268 mL
	5 mM	0.3445 mL	1.7227 mL	3.4454 mL
	10 mM	0.1723 mL	0.8613 mL	1.7227 mL

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

BIOLOGICAL ACTIVITY

Description

EDTA-AM (ethylenediaminetetraacetic acid, acetoxymethyl ester) is the membrane-permeant form of the metal chelator EDTA (HY-Y0682). Live cells passively load EDTA-AM by incubating with EDTA-AM. Once internalized, cytoplasmic esterase decomposes AM esters, releasing the active ligand EDTA, which isolates metal ions within the cell. EDTA-AM induces an arrest of mitotic progression and chromosome decondensation[1][2].

In Vitro

EDTA-AM treatment of mitotic cells
1. Mitotic cells were collected and seeded onto a 12-well culture plate with poly lysine-coated coverslips and DMEM supplemented with 10% FBS.
2. EDTA-AM was dissolved in 100 mM DMSO, EDTA-AM was added to the culture medium at a final concentration of 20 mM with 0.02% Pluronic F-127 (Invitrogen), and the cells were further incubated at 37C for 100 min.
3.After incubation, the numbers of mitotic cells and interphase cells were counted. The cells on the coverslips were fixed, stained with DAPI, and mounted with para-phenylene diamine (PPDI) solution (20 mM HEPES, pH 7.4, 1 mM MgCl2, 100 mM KCl, 78% glycerol, 1 mg/mL PPDI).
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Watkins CS, et.al. Effects on K+ currents in rat cerebellar granule neurones of a membrane-permeable analogue of the calcium chelator BAPTA. Br J Pharmacol. 1996 Aug;118(7):1772-8.

[2]. Maeshima K, et.al. A Transient Rise in Free Mg2+Ions Released from ATP-Mg Hydrolysis Contributes to Mitotic Chromosome Condensation. Curr Biol. 2018 Feb 5;28(3):444-451.e6.

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