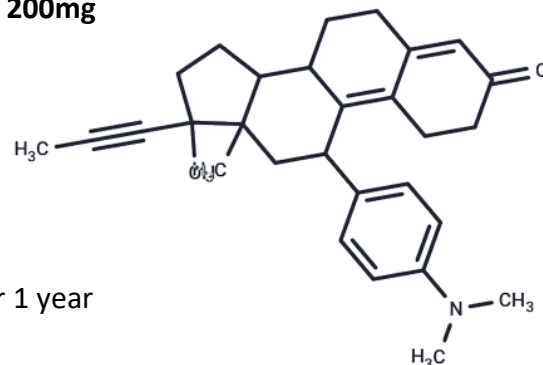


Mifepristone [84371-65-3]

#Cat: NB-64-02264 - 1mL	Size: 1mL
#Cat: NB-64-02264 - 50mg	Size: 50mg
#Cat: NB-64-02264 - 500mg	Size: 500mg
#Cat: NB-64-02264 - 100mg	Size: 100mg
#Cat: NB-64-02264 - 200mg	Size: 200mg

Chemical Properties

Cas No:	84371-65-3
Formula:	C ₂₉ H ₃₅ NO ₂
Molecular weight:	429.59
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Mifepristone (C-1073) is a Progestin Antagonist. The mechanism of action of mifepristone is as a Progestational Hormone Receptor Antagonist.
Targets(IC₅₀)	Glucocorticoid Receptor, Estrogen/progestogen Receptor, NO Synthase, Autophagy, Progesterone Receptor
In vitro	Mifepristone, at the highest dose in rats, significantly reduced prostate weight and largely inhibited dihydrotestosterone-induced prostate growth and induced atrophy and cell death. Mifepristone inhibited SK-OV-3 tumor growth in immunosuppressed mice at 0.5 mg and 1 mg per day.
In vivo	Mifepristone, at the highest dose in rats, significantly reduced prostate weight and largely inhibited dihydrotestosterone-induced prostate growth and induced atrophy and cell death. Mifepristone inhibited SK-OV-3 tumor growth in immunosuppressed mice at 0.5 mg and 1 mg per day.
Kinase Assay	Glucocorticoid receptor (GR) antagonist activity, Progesterone receptor (PR) antagonist activity: T47D alkaline phosphatase assay: T47D human breast cancer cells are plated in 96-well tissue culture plates at 104 cells per well in assay medium [RPMI medium without phenol red containing 5% (v/v) charcoal-treated FBS and 1% (v/v) penicillin streptomycin]. Two days later, the medium is decanted and Mifepristone or control is added at a final concentration of 0.1% (v/v) dimethyl sulfoxide in fresh assay medium. Twenty-four hours later, an alkaline phosphatase assay is performed using a SEAP kit. The medium is decanted and the cells are fixed for 30 minutes at room temperature with 5% (v/v) formalin. The cells are washed once at room temperature with Hanks buffered saline solution. Equal volumes (0.05 mL) of dilution buffer, assay buffer, and 1:20 substrate/enhancer mixture are then added. After 1-hour incubation in the dark at room temperature, the lysate is transferred to a white 96-well plate and luminescence is read using a LuminoSkan Ascen. A549 reporter assay: A549 human lung carcinoma cells are washed with OPTI-MEM I. The medium is removed and lipid-DNA complex solution (1.5 µg/mL of GRE-luciferase reporter DNA in 8.5 mL OPTI-MEM I plus 6 µL/mL DMRIE-C reagent in 8.5 mL OPTI-MEM I, combined, mixed and incubated at room temperature for 40 minutes) is overlayed onto the cells in a T160 flask. The cells are incubated for 16 hours at 37 °C in a CO2 incubator. The DNA-containing medium is removed and 30 mL of growth medium containing 5% (v/v) charcoal-treated fetal bovine serum is added. After 5-6 hours, the cells are seeded in 96-well plates and incubated overnight at 37 °C. Mifepristone is then added to each well followed by dexamethasone as a corticoid challenge.

	The cells are incubated for 24 hours. Luciferase assay buffer is added to each well and the cells are incubated for 30 minutes at room temperature. Luciferase activity is measured in a DYNEX Microlite plate on a TopCount.
Cell Research	Cell growth is evaluated in various ovarian cancer cell lines that are subjected to dose response or time course treatments. Media containing each of the doses of fresh steroids is replaced every 24 hours. Control groups of cells are treated with vehicle ethanol at a final concentration of less than 0.05%. Number of viable cells is evaluated by trypsinization and counting in a hemocytometer chamber using trypan blue dye exclusion. Experiments are conducted in media without phenol red and supplemented with charcoal extracted fetal bovine serum, or media containing unextracted serum and having phenol red. Similar results are obtained with both media preparations; therefore, after performing the growth curves, all subsequent experiments are conducted using media with unextracted serum and in the presence of phenol red. When indicated, the proliferation IC50s are calculated using software designed to study drug interaction. (Only for Reference)

Solubility Information

Solubility	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4.3 mg/mL (10.01 mM), suspension. In vivo: Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. DMSO: 45 mg/mL (104.75 mM), Sonication is recommended. Ethanol: 21.5 mg/mL (50 mM)), Heating is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3278 mL	11.639 mL	23.278 mL
5 mM	0.4656 mL	2.3278 mL	4.6556 mL
10 mM	0.2328 mL	1.1639 mL	2.3278 mL
50 mM	0.0466 mL	0.2328 mL	0.4656 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.

Reference

Zhao X, Li F, Cheng C, et al. Social isolation promotes tumor immune evasion via β 2-adrenergic receptor. Brain, Behavior, and Immunity. 2024
Jiang W, et al. Bioorg Med Chem, 2006, 14(19), 6726-6732.
Goyeneche AA, et al. Clin Cancer Res, 2007, 13(11), 3370-3379.
Wang Y, et al. Stem Cells, 2012, 30(2), 169-179.
Cabeza M, et al. J Steroid Biochem Mol Biol, 2007, 104(3-5), 321-325.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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