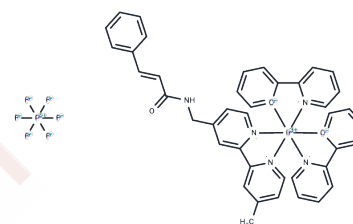


## Ir-CA

## Chemical Properties

CAS No. :	2870682-93-0
Formula:	C43H35F6IrN5OP
Molecular Weight:	974.95
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Ir-CA is an antitumor agent that accumulates in mitochondria, inducing mitochondrial dysfunction, apoptosis, and autophagy. It initiates mitophagy and cell cycle arrest to kill Cisplatin-resistant A549R cells and effectively inhibits metastasis by inhibiting MMP-2/MMP-9 [1].
Targets(IC50)	Apoptosis, Autophagy
In vitro	Ir-CA exhibits cytotoxic effects on A549, A549R, HLF, BEAS-2B, MCF-7, and 4T1 cells, with IC 50 values of 4.4, 4.5, 6.6, 2.3, 2.6, and 5.7 $\mu$ M, respectively [1]. It is rapidly taken up by A549R cells, as indicated by red fluorescence after 1 hour of incubation [1]. At a concentration of 10 $\mu$ M for 2 hours, Ir-CA accumulates in the mitochondria of live A549 and A549R cells, as shown by co-staining with Mito-Tracker [1]. Exposure to Ir-CA (10 $\mu$ M) for 24 hours damages the mitochondrial morphology and function of A549R cells and induces ROS production [1]. Ir-CA at the same concentration induces apoptosis in A549R cells via a non-apoptotic/necrotic pathway and increases the conversion of LC3-I to LC3-II, indicating autophagy [1]. Additionally, Ir-CA (2.5 $\mu$ M, 24 hours) resensitizes A549R cells to cisplatin [1], and at 5 $\mu$ M for 24 hours, it inhibits A549R cell metastasis by downregulating MMP [1].
In vivo	Ir-CA (5 mg/kg, administered intraperitoneally every other day for 8 days) reduces lung metastasis of A549 cells in a metastatic mouse model (via tail vein injection of A549 cells) [1]. Ir-CA (5 mg/kg, administered intraperitoneally every other day for 14 days) suppresses tumor growth in A549 tumor-bearing Balb/c nude mice [1].

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.0257 mL	5.1285 mL	10.2569 mL
5 mM	0.2051 mL	1.0257 mL	2.0514 mL
10 mM	0.1026 mL	0.5128 mL	1.0257 mL
50 mM	0.0205 mL	0.1026 mL	0.2051 mL

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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