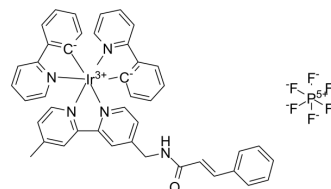


## Ir-CA

<b>Cat. No.:</b>	HY-162344
<b>CAS No.:</b>	2870682-93-0
<b>Molecular Formula:</b>	C <sub>43</sub> H <sub>35</sub> F <sub>6</sub> IrN <sub>5</sub> OP
<b>Molecular Weight:</b>	974.95
<b>Target:</b>	Apoptosis; Autophagy
<b>Pathway:</b>	Apoptosis; Autophagy
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



## BIOLOGICAL ACTIVITY

<b>Description</b>	Ir-CA is an antitumor agent. Ir-CA can accumulate in mitochondria and induces mitochondria dysfunction. Ir-CA induces apoptosis and autophagy. Ir-CA initiates mitophagy and cell cycle arrest to kill Cisplatin (HY-17394)-resistant A549R cells. Ir-CA can effectively inhibit metastasis by inhibiting MMP-2/MMP-9 <sup>[1]</sup> .
<b>In Vitro</b>	<p>Ir-CA shows cytotoxicity against A549, A549R, HLF, BEAS-2B, MCF-7, 4T1 cells with IC<sub>50</sub>s of 4.4, 4.5, 6.6, 2.3, 2.6, 5.7 μM respectively<sup>[1]</sup>.</p> <p>Ir-CA is quickly absorbed by the A549R cells (indicated by the red fluorescence after 1 h of incubation)<sup>[1]</sup>.</p> <p>Ir-CA (10 μM, 2 h) can accumulate in the mitochondria of living A549 and A549R cells (Co-staining experiments of Ir-CA with Mito-Tracker)<sup>[1]</sup>.</p> <p>Ir-CA (10 μM, 24 h) damages mitochondrial morphology and the mitochondrial function in A549R cells, and induces ROS production<sup>[1]</sup>.</p> <p>Ir-CA (10 μM, 24 h) induces cell apoptosis in A549R cells via a nonapoptotic/necrotic pathway, and also increases conversion from LC3-I to LC3-II, suggesting the autophagy<sup>[1]</sup>.</p> <p>Ir-CA (2.5 μM, 24 h) resensitizes the A549R cells to Cisplatin (HY-17394)<sup>[1]</sup>.</p> <p>Ir-CA (5 μM, 24 h) inhibits the metastasis of A549R cells via down-regulation of MMPs<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>Ir-CA (5 mg/kg, i.p., once every other day for 8 d) inhibits pulmonary metastasis of A549 cells in metastasis mice models (via injection of the A549 cells from the tail vein)<sup>[1]</sup>.</p> <p>Ir-CA (5 mg/kg, i.p., once every other day for 14 d) inhibits tumor growth in A549 tumor-bearing Balb/c nude mice<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

## REFERENCES

[1]. Yang J, et al. Consolidating Organometallic Complex Ir-CA Empowers Mitochondria-Directed Chemotherapy against Resistant Cancer via Stemness and Metastasis Inhibition. *Inorg Chem.* 2024 Mar 7.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA