

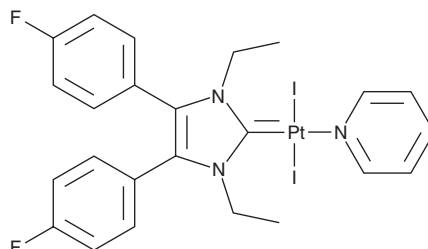
PRODUCT INFORMATION



Pt(II)-NHC Complex 2C

Item No. 36432

Formal Name: (1,3-diethyl-4,5-bis(4-fluorophenyl)-1,3-dihydro-2H-imidazol-2-ylidene)(1-pyridyl) platinum(IV) iodide
Synonym: Platinum(II)-N-Heterocyclic Carbene Complex 2C
MF: $C_{24}H_{23}F_2I_2N_3Pt$
FW: 840.3
Purity: $\geq 95\%$
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pt(II)-NHC complex 2C is supplied as a crystalline solid. A stock solution may be made by dissolving the Pt(II)-NHC complex 2C in the solvent of choice, which should be purged with an inert gas. Pt(II)-NHC complex 2C is slightly soluble in chloroform, DMSO, and dimethyl formamide.

Description

Pt(II)-NHC complex 2C is an inducer of immunogenic cell death (ICD) in cancer cells.¹ It selectively inhibits proliferation of HT-29, MCF-7, A2780, A549, HepG2, and Hepa 1-6 cancer cells (IC_{50} s = 2.78, 0.71, 0.99, 1.77, 0.33, and 0.36 μM , respectively) over non-cancerous L-02 liver cells (IC_{50} = 3.02 μM). It induces the release of damage-associated molecular patterns (DAMPs) associated with ICD in Hepa 1-6 cells by increasing calreticulin (CRT) exposure on the cell membrane, extracellular ATP release, and high mobility group protein B₁ (HMGB1) translocation to the cytoplasm. Pt(II)-NHC complex 2C (2 μM) also increases the generation of reactive oxygen species (ROS), as well as induces DNA damage and cell cycle arrest at the S phase in HepG2 cells. It reduces tumor growth in a mouse antitumor vaccination model of the ICD response in mice when used at a concentration of 5 μM in Hepa 1-6 cells prior to implantation.

Reference

1. Bian, M., Fan, R., Yang, Z., *et al.* Pt(II)-NHC complex induces ROS-ERS-related DAMP balance to harness immunogenic cell death in hepatocellular carcinoma. *J. Med. Chem.* **65**(3), 1848-1866 (2022).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM