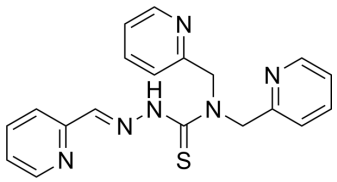
NSC 689534

Cat. No.:	HY-156780
CAS No.:	907958-80-9
Molecular Formula:	$C_{19}H_{18}N_6S$
Molecular Weight:	362.45
Target:	Cuproptosis
Pathway:	Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



BIOLOGICAL ACTIVITY

Description	NSC 689534 can form copper chelate with Cu^{2+}. NSC 689534/Cu^{2+} complex is a potent oxidative stress inducer, and has antitumor activity[1].
In Vitro	NSC 689534/Cu^{2+} complex (48 h) inhibits cell viability of HL60 and PC3 cell with IC_{50}s of 0.2 and 0.4 μM respectively, which is about 4 times more potent than NSC 689534 alone[1]. NSC 689534/Cu^{2+} complex (2.5 μM, 24 h) induces oxidative stress and depletes GSH in PC3 cells, whereas with no effect by NSC 689534 alone[1]. NSC 689534/Cu^{2+} complex (2.5 μM, 24 h) induces macroautophagy (indicated by LC3 accumulation into large autophagosomes) and an ER-stress response (upregulation of GRP78 and CHOP) in PC3 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	NSC 689534/Cu^{2+} complex (3 mg/kg, i.p., once or twice a day for 5 days) inhibits tumor growth in HL60 xenograft model, whereas with no statistical significance by NSC 689534 alone[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Front Biosci (Landmark Ed). 2024 Jan 17, 29(1), 19.

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REFERENCES

[1]. Chad N Hancock, et al. A copper chelate of thiosemicarbazone NSC 689534 induces oxidative/ER stress and inhibits tumor growth in vitro and in vivo. Free Radic Biol Med. 2011 Jan 1;50(1):110-21.

[2]. Hancock CN, et al. A copper chelate of thiosemicarbazone NSC 689534 induces oxidative/ER stress and inhibits tumor growth in vitro and in vivo. Free Radic Biol Med. 2011 Jan 1;50(1):110-21.

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

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