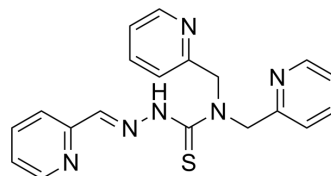


## NSC 689534

<b>Cat. No.:</b>	HY-156780		
<b>CAS No.:</b>	907958-80-9		
<b>Molecular Formula:</b>	C <sub>19</sub> H <sub>18</sub> N <sub>6</sub> S		
<b>Molecular Weight:</b>	362.45		
<b>Target:</b>	Others; Cuproptosis		
<b>Pathway:</b>	Others		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### BIOLOGICAL ACTIVITY

<b>Description</b>	NSC 689534 can form copper chelate with Cu <sup>2+</sup> . NSC 689534/Cu <sup>2+</sup> complex is a potent oxidative stress inducer, and has antitumor activity <sup>[1]</sup> .
<b>In Vitro</b>	NSC 689534/Cu <sup>2+</sup> complex (48 h) inhibits cell viability of HL60 and PC3 cell with IC <sub>50</sub> s of 0.2 and 0.4 μM respectively, which is about 4 times more potent than NSC 689534 alone <sup>[1]</sup> . NSC 689534/Cu <sup>2+</sup> complex (2.5 μM, 24 h) induces oxidative stress and depletes GSH in PC3 cells, whereas with no effect by NSC 689534 alone <sup>[1]</sup> . NSC 689534/Cu <sup>2+</sup> 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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	NSC 689534/Cu <sup>2+</sup> 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 <sup>[1]</sup> . 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.

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

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