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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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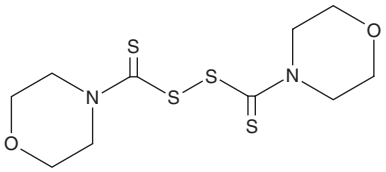
PRODUCT INFORMATION

JX06

Item No. 34850

CAS Registry No.: 729-46-4
Formal Name: 4,4′-(dithiodicarbonothioyl)*bis*-morpholine
Synonym: NSC 402538
MF: $C_{10}H_{16}N_2O_2S_4$
FW: 324.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

JX06 is supplied as a solid. A stock solution may be made by dissolving the JX06 in the solvent of choice, which should be purged with an inert gas. JX06 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of JX06 in these solvents is approximately 10 and 15 mg/ml, respectively.

Description

JX06 is an irreversible inhibitor of pyruvate dehydrogenase kinases (PDHKs; IC_{50}s = 49, 101, and 313 nM for PDHK1, PDHK2, and PDHK3, respectively).[1] It is selective for PDHK1-3 over PDHK4 (IC_{50} = >10 µM) and 322 other kinases at 10 µM but does inhibit FAK in a cell-free panel but not in a cell-based assay. JX06 (10 µM) increases the production of reactive oxygen species (ROS) and induces apoptosis in cancer cells with high ratios of their extracellular acidification rate (ECAR) to oxygen consumption rate (OCR). It also reduces the level of metabolites associated with glycolysis in NCI H929 multiple myeloma cells when used at a concentration of 0.25 µM.[2] JX06 (40 or 80 mg/kg per day) reduces tumor growth in a mouse xenograft model using A549 cells, which have a high ECAR:OCR ratio, but not HT-29 cells, which have a lower ECAR:OCR ratio.

References

1. Sun, W., Xie, Z., Liu, Y., *et al.* JX06 selectively inhibits pyruvate dehydrogenase kinase PDK1 by a covalent cysteine modification. *Cancer Res.* **75(22)**, 4923-4936 (2015).
2. Kawano, Y., Sasano, T., Arima, Y., *et al.* A novel PDK1 inhibitor, JX06, inhibits glycolysis and induces apoptosis in multiple myeloma cells. *Biochem. Biophys. Res. Commun.* **587**, 153-159 (2022).

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