

Product data sheet



MedKoo Cat#: 464560 Name: QD-394 CAS: 2132411-21-1 Chemical Formula: C ₁₉ H ₁₉ N ₅ O ₂ Exact Mass: 349.1539 Molecular Weight: 349.3940	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

QD394 is a reactive oxygen species (ROS) inducer with significant cytotoxicity in pancreatic cancer cells.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	1.0	2.86
DMSO	5.0	14.31
DMSO:PBS (pH 7.2) (1:20)	0.04	0.11
Ethanol	1.0	2.86

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.86 mL	14.31 mL	28.62 mL
5 mM	0.57 mL	2.86 mL	5.72 mL
10 mM	0.29 mL	1.43 mL	2.86 mL
50 mM	0.06 mL	0.29 mL	0.57 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Hu S, Sechi M, Singh PK, Dai L, McCann S, Sun D, Ljungman M, Neamati N. A Novel Redox Modulator Induces a GPX4-Mediated Cell Death That Is Dependent on Iron and Reactive Oxygen Species. *J Med Chem.* 2020 Sep 10;63(17):9838-9855. doi: 10.1021/acs.jmedchem.0c01016. Epub 2020 Aug 28. PMID: 32809827; PMCID: PMC8082945.

In vivo study

TBD

7. Bioactivity

Biological target:

QD394 is a reactive oxygen species inducer that can induce lipid peroxidation, increase intracellular ROS accumulation, inhibit STAT3 phosphorylation, and induce ferroptosis.

In vitro activity

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QD394 shows a transcriptomic profile remarkably similar to napabucasin, a cancer stemness inhibitor. Both small molecules inhibit STAT3 phosphorylation, increase cellular ROS, and decrease the GSH/GSSG ratio. QD394 causes an iron- and ROS-dependent, GPX4 mediated cell death, suggesting ferroptosis as a major mechanism. QD394 decreases the expression of LRPPRC and PNPT1 proteins.

Reference: J Med Chem. 2020 Sep 10;63(17):9838-9855. <https://pubmed.ncbi.nlm.nih.gov/32809827/>

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.