

Product data sheet



MedKoo Cat#: 527857 Name: FX11 CAS#: 213971-34-7 Chemical Formula: C ₂₂ H ₂₂ O ₄ Exact Mass: 350.1518 Molecular Weight: 350.414	
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:

FX11 is a selective inhibitor of LDHA, inhibiting tumor xenograft progression.

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
DMSO	250.0	713.44

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.85 mL	14.27 mL	28.54 mL
5 mM	0.57 mL	2.85 mL	5.71 mL
10 mM	0.29 mL	1.43 mL	2.85 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

1. Krishnamoorthy G, Kaiser P, Abu Abed U, Weiner J 3rd, Moura-Alves P, Brinkmann V, Kaufmann SHE. FX11 limits Mycobacterium tuberculosis growth and potentiates bactericidal activity of isoniazid through host-directed activity. Dis Model Mech. 2020 Mar 30;13(3):dmm041954. doi: 10.1242/dmm.041954. PMID: 32034005; PMCID: PMC7132771.

In vivo study

1. Krishnamoorthy G, Kaiser P, Abu Abed U, Weiner J 3rd, Moura-Alves P, Brinkmann V, Kaufmann SHE. FX11 limits Mycobacterium tuberculosis growth and potentiates bactericidal activity of isoniazid through host-directed activity. Dis Model Mech. 2020 Mar 30;13(3):dmm041954. doi: 10.1242/dmm.041954. PMID: 32034005; PMCID: PMC7132771.

2. Rellinger EJ, Craig BT, Alvarez AL, Dusek HL, Kim KW, Qiao J, Chung DH. FX11 inhibits aerobic glycolysis and growth of neuroblastoma cells. Surgery. 2017 Mar;161(3):747-752. doi: 10.1016/j.surg.2016.09.009. Epub 2016 Dec 2. PMID: 27919448; PMCID: PMC5369647.

7. Bioactivity

Biological target:

FX-11 (LDHA Inhibitor FX11) is a potent lactate dehydrogenase A (LDHA) inhibitor with an IC₅₀ of 23.3 μM for HeLa cell and a Ki value of 8 μM.

In vitro activity

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FX11 addition increased the oxygen consumption rate (OCR), but decreased the respiratory capacity and ATP synthesis (Fig. 1A,B; Supplementary Materials and Methods). Essentially, FX11, at 14.3 μM concentration, uncoupled the mitochondrial respiratory chain from the phosphorylation system.

Reference: Dis Model Mech. 2020 Mar 1; 13(3): dmm041954. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7132771/>

In vivo activity

Four of the five tested neuroblastoma cell lines (BE(2)-C, LAN-1, SK-N-SH, and SK-N-AS) demonstrated a significant decrease in the S-phase population, ranging from 2–7% decrease in S phase population (Fig. 3). Taken together, these findings suggest that low micromolar concentration (10 μM) of FX11 blocks progression through the cell cycle with resultant decrease in overall cellular proliferation.

Reference: Surgery. 2017 Mar; 161(3): 747–752. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5369647/>

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.