LDCA

Cat. No.: HY-147361

CAS No.: 349106-80-5

Molecular Formula: $C_8H_5Cl_3FNO$

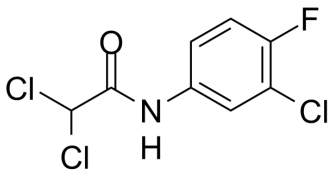
Molecular Weight: 256.49

Target: Apoptosis; Lactate Dehydrogenase

Pathway: Apoptosis; Metabolic Enzyme/Protease

Storage:

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (389.88 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8988 mL	19.4939 mL	38.9879 mL
	5 mM	0.7798 mL	3.8988 mL	7.7976 mL
	10 mM	0.3899 mL	1.9494 mL	3.8988 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.75 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.75 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LDCA is a dual-hit metabolic modulator and inhibits LDH-A enzyme activity to stimulate apoptosis in the malignant population. LDCA can be used for the research of oncogenic progression[1].

In Vitro

LDCA (2-100 μM; 16-72 h) is used in combination with doxorubicin synergistically, enhances the growth inhibition and induces mitochondria-mediated apoptosis by recruiting the caspase cascade, restricting migration, and obviating the clonogenic outgrowth potential of melanoma cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	B16-F10 cells
Concentration:	2-100 μM
Incubation Time:	72 h
Result:	Arrested cell growth with a dose-dependent cytotoxic effect and had a strong synergism with LDCA.

Apoptosis Analysis[1]

Cell Line:	B16-F10 cells
Concentration:	20 μM
Incubation Time:	24 h
Result:	Resulted 15% death when cells exposed to LDCA and caused 40% melanoma cell death combination synergistically with doxorubicin.

Immunofluorescence[1]

Cell Line:	B16-F10 cells
Concentration:	20 μM
Incubation Time:	16 h
Result:	Demonstrated that combination with doxorubicin resultantly affected cellular morphology with condensed and fragmented nuclei.

Cell Migration Assay [1]

Cell Line:	B16-F10 cells
Concentration:	20 μM
Incubation Time:	16 h
Result:	Signicantly limited the migratory potential in the B16-F10 cells.

In Vivo

LDCA (2 mg/kg, iv., the 6th day, once) is used in combination with doxorubicin thwarts tumor growth kinetics to restrain oncogenic progression, thus accentuating survival in the model of murine melanoma[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	melanoma tumor model[1]
Dosage:	2 mg/kg
Administration:	2 mg/kg, iv., the 6th day, once
Result:	Significantly increased mice survivability combination with doxorubicin, and relieved mice tumor necrosis phenomena.

REFERENCES

[1]. Saha, Suchandrima, et al. The dual-hit metabolic modulator LDCA synergistically potentiates doxorubicin to selectively combat cancer-associated hallmarks. RSC Advances, 7(84), 53322–53333. doi:10.1039/c7ra08625c.

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