Moroxydine hydrochloride

Cat. No.: HY-B0420A

CAS No.: 3160-91-6

Molecular Formula: $C_6H_{14}ClN_5O$

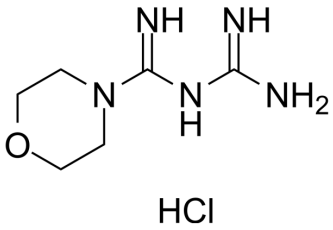
Molecular Weight: 207.66

Target: Influenza Virus; HCV

Pathway: Anti-infection

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 100 mg/mL (481.56 mM)

DMSO : 50 mg/mL (240.78 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.8156 mL	24.0778 mL	48.1556 mL
5 mM	0.9631 mL	4.8156 mL	9.6311 mL
10 mM	0.4816 mL	2.4078 mL	4.8156 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (481.56 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (12.04 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (12.04 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (12.04 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Moroxydine (ABOB) hydrochloride has multi-antiviral activities against DNA and RNA viruses including influenza symptoms, herpes simplex, varicellazoster, measles, mumps disease, hepatitis C virus, etc. Moroxydine hydrochloride shows high anti-grass carp reovirus (GCRV) activity[1].

In Vitro

Moroxydine (ABOB; 1.0-100 μg/mL; 24-96 h) hydrochloride shows concentration- and time-dependent induction of cell

viability in GCRV infected CIK cells[1].
Moroxydine (40 μg/mL; 48, 96 h) hydrochloride blocks the virus-induced cytopathic effect (CPE) and cell death within 96 h[1].
Moroxydine (40 μg/mL; 12-48 h) hydrochloride completely avoids the apoptosis and also significantly inhibits the caspase 3 activity, Bax expression and down-regulated Bcl-2 at 48 h[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	GCRV infected CIK cells
Concentration:	1.0, 2.5, 6.3, 15.9, 39.8, 100 μg/mL
Incubation Time:	24, 48, 72, 96 h
Result:	Showed concentration- and time-dependent induction of cell viability.

Apoptosis Analysis[1]

Cell Line:	GCRV infected CIK cells
Concentration:	40 μg/mL
Incubation Time:	48, 96 h
Result:	Could block the virus-induced CPE and cell death within 96 h.

Western Blot Analysis[1]

Cell Line:	GCRV infected CIK cells
Concentration:	40 μg/mL
Incubation Time:	12, 24, 48 h
Result:	Completely avoided the apoptosis and also significantly inhibited the caspase 3 activity, Bax expression and down-regulated Bcl-2 at 48 h, compared with GCRV infection group.

REFERENCES

[1]. Xiao-Bo Yu, et al. Moroxydine hydrochloride inhibits grass carp reovirus replication and suppresses apoptosis in Ctenopharyngodon idella kidney cells. Antiviral Res. 2016 Jul:131:156-65.

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