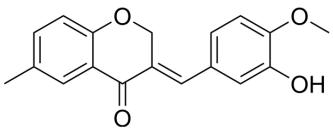
IMS2186

Cat. No.:	HY-101990
CAS No.:	1031206-36-6
Molecular Formula:	$C_{18}H_{16}O_4$
Molecular Weight:	296.32
Target:	Others
Pathway:	Others
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 66.67 mg/mL (224.99 mM; Need ultrasonic)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	3.3747 mL	16.8736 mL	33.7473 mL
5 mM	0.6749 mL	3.3747 mL	6.7495 mL
10 mM	0.3375 mL	1.6874 mL	3.3747 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 1.25 mg/mL (4.22 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

IMS2186 is an antichoroidal neovascularization (CNV) reagent. IMS2186 can arrest cancer cell cycle in G2/M phase, thus exerting anti-proliferation and anti-angiogenesis effects. IMS2186 has no intraocular toxicity and reduces the amount of eye leakage and diseased cells[1].

In Vitro

IMS2186 (0.3-10 μM; 22 h) inhibits the proliferation of human fibroblasts and human cancer cells with IC_{50} values of 1.0-3.0 μM and 0.3-3.0 μM, respectively[1].
IMS2186 (0-10 μM; 22 h) inhibits endodermal tube formation under 10 ng/mL VEGF stimulation with IC_{50} of 0.1-0.3 μM[1].
IMS2186 (0.1-10 μM; 24 h) inhibits the production of proinflammatory cytokines PGE2/TNF-a in macrophages with IC_{50} of 0.3-1 μM[1].
IMS2186 (0.1-10 μM; 1.5 h) also inhibits macrophage migration with IC_{50} of 1 μM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cycle Analysis[1]

Cell Line:	Cancer H460 cells
Concentration:	3 μM, 10 μM
Incubation Time:	
Result:	Showed anti-proliferative activity mediated by arresting cell cycle at G2/M.

In Vivo

IMS2186 (2.5 mg in 0.5 mL; intravitreal injection; single dose) has no ocular toxicity while applied to rabbit eyes[1].
IMS2186 (100 μg/eye, i.e. 2.0 μL of the solution of 50 μg/μL; single dose) shows anti-proliferative effect on laser-induced choroidal neovascularization (CNV) rat models[1].

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

Animal Model:	Rat model of laser induced CNV[1]
Dosage:	100 μg/eye, 2.0 μL of the solution of 50 μg/μL
Administration:	Intravitreal injection; single dose
Result:	Resulted 30% reduction of lesion area compared to PBS in the lesion area measurement.

REFERENCES

[1]. Falkenstein IA, et al. Toxicity and intraocular properties of a novel long-acting anti-proliferative and anti-angiogenic compound IMS2186. Curr Eye Res. 2008 Jul;33(7):599-609.

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