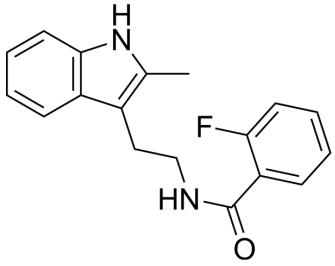
CK-666

Cat. No.:	HY-16926
CAS No.:	442633-00-3
Molecular Formula:	$C_{18}H_{17}FN_2O$
Molecular Weight:	296.34
Target:	Arp2/3 Complex; HIV
Pathway:	Cytoskeleton; Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (421.81 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3745 mL	16.8725 mL	33.7450 mL
	5 mM	0.6749 mL	3.3745 mL	6.7490 mL
	10 mM	0.3375 mL	1.6873 mL	3.3745 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: ≥ 12.5 mg/mL (42.18 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 12.5 mg/mL (42.18 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 12.5 mg/mL (42.18 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CK-666 is a cell-permeable actin-related protein Arp2/3 complex inhibitor (IC_{50}=12 μM). CK-666 binds to Arp2/3 complex, stabilizes the inactive state of the complex, blocking movement of the Arp2 and Arp3 subunits into the activated filament-like (short pitch) conformation[1][2].

IC_{50} & Target

HIV-1

In Vitro

CK-666 (100 μM) significantly reduces the number of filopodia on the cell surface of treated trabecular meshwork (TM) cells

as well as reduces the length of those filopodia that are present[3].

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

CUSTOMER VALIDATION

- Small. 2021 Nov 5;e2104328.
- Cell Death Dis. 2020 Sep 15;11(9):757.
- NPJ Parkinsons Dis. 2024 Apr 9;10(1):80.
- iScience. 2021 Dec 25;25(1):103676.
- J Ethnopharmacol. 2021 Jan 10;264:113206.

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REFERENCES

[1]. Hetrick B, et al. Small molecules CK-666 and CK-869 inhibit actin-related protein 2/3 complex by blocking an activating conformational change. Chem Biol. 2013 May 23;20(5):701-12.

[2]. Brieuc P Perot, et al. Dendritic Cell Maturation Regulates TSPAN7 Function in HIV-1 Transfer to $CD4^+$ T Lymphocytes. Front Cell Infect Microbiol. 2020 Feb 28;10:70.

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