Compound E

Cat. No.: HY-14176

CAS No.: 209986-17-4

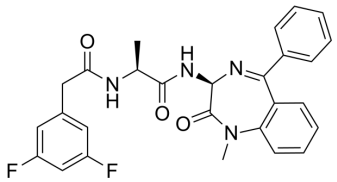
Molecular Formula: $C_{27}H_{24}F_2N_4O_3$

Molecular Weight: 490.5

Target: γ-secretase

Pathway: Neuronal Signaling; Stem Cell/Wnt

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (203.87 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0387 mL	10.1937 mL	20.3874 mL
	5 mM	0.4077 mL	2.0387 mL	4.0775 mL
	10 mM	0.2039 mL	1.0194 mL	2.0387 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.88 mg/mL (5.87 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (5.10 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.10 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Compound E is a γ-secretase inhibitor. Compound E bloks β-amyloid(40), β-amyloid(42), and Notch γ-secretase cleavage with IC_{50}s of 0.24, 0.37, 0.32 nM, respectively.

IC_{50} & Target

IC50: 0.24 nM (β-amyloid(40)), 0.37 nM (β-amyloid(42)), 0.24 nM (Notch)[1]

In Vitro

Compound E reduces the proliferation of T47D, and MCF-7 cell lines by less than 50% at a concentration of 50?μM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

The breast cancer cell lines MDA-MB-231, T47D, and MCF-7 are treated with Compound E at concentrations in the range 0.01-50 μM for 48 h and their viability is determined using a Coulter counter[1].

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

CUSTOMER VALIDATION

- Nat Commun. 2022 Jul 18;13(1):4148.
- Chem Eng J. 1 January 2023, 138737.
- Sci Adv. 2022 Feb 25;8(8):eabk1826.
- Cell Rep. 2021 Dec 7;37(10):110102.
- Front Cell Dev Biol. 2021 Jun 21;9:671704.

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REFERENCES

[1]. Beher D, et al. Pharmacological knock-down of the presenilin 1 heterodimer by a novel gamma -secretase inhibitor: implications for presenilin biology. J Biol Chem. 2001 Nov 30;276(48):45394-402.

[2]. Rasul S, et al. Inhibition of gamma-secretase induces G2/M arrest and triggers apoptosis in breast cancer cells. Br J Cancer. 2009 Jun 16;100(12):1879-88.

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