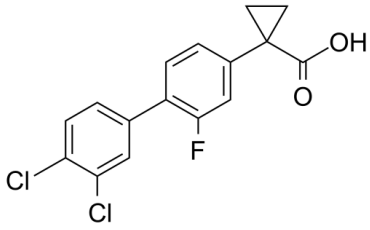
Data Sheet

Product Name:	Itanapraced
Cat. No.:	CS-5022
CAS No.:	749269-83-8
Molecular Formula:	C16H11Cl2FO2
Molecular Weight:	325.16
Target:	γ-secretase
Pathway:	Neuronal Signaling; Stem Cell/Wnt
Solubility:	DMSO : ≥ 37 mg/mL (113.79 mM)



BIOLOGICAL ACTIVITY:

Itanapraced (CHF5074) is a novel γ-secretase modulator, reduces Aβ42 and Aβ40 secretion, with an IC50 of 3.6 and 18.4 μM, respectively. IC50 & Target: IC50 value: 3.6 μM (Aβ42), 18.4 μM (Aβ40) [1]

PROTOCOL (Extracted from published papers and Only for reference)

Cell assay [1] H4swe human neuroglioma cells and of HEK293swe human embryonic kidney 293 cells were seeded onto 24-well plates (2× 105 cell/well) in culture medium containing 10% FBS, and the cells were allowed to grow to confluence for 24 h, in 5% CO2, 95% air in a humidified atmosphere. Cells were exposed overnight to increasing concentrations of CHF5074 (0.03-100μM) and/or (R)-flurbiprofen (10-300μM) in culture medium without serum. CHF5074 was dissolved in DMSO (0.1% final concentration). At the end of the treatment, Aβ40 and Aβ42 in culture media were measured by ELISA. Cell viability was assessed with the 3-[4,5-dimethylthiazol-2-yl]-2,5-diphenyltetrazolium bromide assay. Animal administration [1] Tg2576 transgenic mice (male and female) expressing Swedish mutated form of human APP (APPswe) were bred in-house. All animals were maintained on a 12:12-h light/dark cycle with unrestricted access to food and water until use. Twenty-eight mice of 9.5 to 10.5 months of age were treated with CHF5074 (375 ppm in the diet) or standard diet (controls) for 17 weeks. At week 17, animals were sacrificed by decapitation, and brains were rapidly removed and divided in the two hemispheres. One hemisphere was used for measurements of Aβ plaques, and the other hemisphere was used for extractable Aβ. Blood samples were collected in EDTAcoated tubes and centrifuged at 800g for 20 min to separate plasma. Plasma samples were divided into two aliquots of approximately 100μl each, and they were stored at -80°C until Aβ or CHF5074 assay.

References:

[1]. Imbimbo BP, et al. 1-(3',4'-Dichloro-2-fluoro[1,1'-biphenyl]-4-yl)-cyclopropanecarboxylic acid (CHF5074), a novel gamma-secretasemodulator, reduces brain beta-amyloid pathology in a transgenic mouse model of Alzheimer's disease withoutcausing peripheral toxicity. J Pharmacol Exp Ther. 2007 Dec;323(3):822-830.

[2]. Mango D, et al. Electrophysiological and metabolic effects of CHF5074 in the hippocampus: protection against in vitro ischemia. Pharmacol Res. 2014 Mar;81:83-90.

CAIndexNames:

Cyclopropanecarboxylic acid, 1-(3',4'-dichloro-2-fluoro[1,1'-biphenyl]-4-yl)-

SMILES:

OC(C1(CC1)C(C=C2)=CC(F)=C2C3=CC=C(Cl)C(Cl)=C3)=O

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