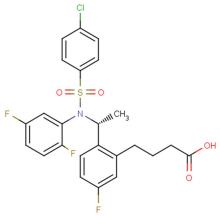
Data Sheet (Cat.No.T14673)

TargetMol
A DRUG SCREENING EXPERT

BMS 299897

Chemical Properties



CAS No.:	290315-45-6
Formula:	C24H21ClF3NO4S
Molecular Weight:	511.94
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	BMS 299897 is a sulfonamide γ-secretase inhibitor. It has an IC50 of 7 nM for Aβ production inhibition in HEK293 cells stably overexpressing amyloid precursor protein (APP).
Targets(IC_{50})	Aβ, in HEK293 cells: 7 nM
In vitro	BMS-299897 reduces the levels of each of the Aβ peptides. BMS-299897 treatment reduces the portion of QD-BDNF signals moving in the retrograde direction (p=0.0198) with a concomitant increase in the portion of signals moving in the anterograde direction (p=0.0147)[2]. At 1 μM, BMS-299897 decreases these peptides to levels ranging from 20 to 50% of the vehicle control.
In vivo	BMS-299897 is administered at 0.1-1 nmol/mouse, concomittantly with Aβ25-35 (9 nmol) in male Swiss mice. After one week, the contents in Aβ1-42 and Aβ1-40, and the levels in lipid peroxidation are analyzed in the mouse hippocampus. Mice are submitted to spontaneous alternation, passive avoidance and object recognition to analyze their short- and long-term memory abilities. BMS-299897 blocks the increase in Aβ1-42 content and decreased Aβ1-40 levels significantly. The compound does not affect Aβ25-35-induced increase in hippocampal lipid peroxidation. Behaviorally, BMS-299897 blocks the Aβ25-35-induced deficits in spontaneous alternation or novel object recognition, using a 1 h intertrial time interval. BMS-299897 reduces both brain and plasma Aβ1-40 in APP-YAC mice and increases brain concentrations of APPcarboxy-terminal fragments, consistent with γ-secretase inhibition. BMS-299897 shows dose- and time-dependent reductions of amyloid β-peptide (Aβ) in brain, cerebrospinal fluid (CSF), and plasma in young transgenic mice, with a correlation between brain and CSF Aβ levels. BMS-299897, attenuates this Aβ25-35-induced Aβ1-42 seeding and toxicity. Aβ25-35 increases Aβ1-42 content (+240%) but fails to affect Aβ1-40. The co-administration of the γ-secretase inhibitor BMS-299897, in the 0.1-1 μmol/mouse dose-range, completely blocks the Aβ25-35-induced increase in Aβ1-42 content[1].

Solubility Information

Solubility	DMSO: 30 mg/mL (58.60 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.953 mL	9.767 mL	19.534 mL
5 mM	0.391 mL	1.953 mL	3.907 mL
10 mM	0.195 mL	0.977 mL	1.953 mL
50 mM	0.039 mL	0.195 mL	0.391 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Meunier J, et al. The γ-secretase inhibitor 2-[(1R)-1-[(4-chlorophenyl)sulfonyl](2,5-difluorophenyl) amino]ethyl-5-fluorobenzenebutanoic acid (BMS-299897) alleviates Aβ1-42 seeding and short-term memory deficits in the Aβ25-35 mouse model of Alzheimer's d

2. Weissmiller AM, et al. A γ-secretase inhibitor, but not a γ-secretase modulator, induced defects in BDNF axonal trafficking and signaling: evidence for a role for APP. PLoS One. 2015 Feb 24;10(2):e0118379.

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