

## BMS 299897

Catalog No: tcsc1339



### Available Sizes

Size: 10mg

Size: 50mg



### Specifications

**CAS No:**

290315-45-6

**Formula:**

$C_{24}H_{21}ClF_3NO_4S$

**Pathway:**

Stem Cell/Wnt;Neuronal Signaling

**Target:**

$\gamma$ -secretase; $\gamma$ -secretase

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 30$  mg/mL (58.60 mM)

**Observed Molecular Weight:**

511.94

### Product Description

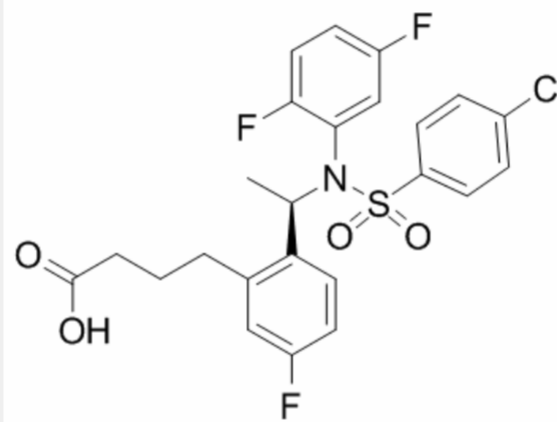
BMS 299897 is a sulfonamide  **$\gamma$ -secretase** inhibitor with an **IC<sub>50</sub>** of 7 nM for A $\beta$  production inhibition in HEK293 cells stably overexpressing amyloid precursor protein (APP).

IC50 & Target: IC50: 7 nM (A $\beta$ , in HEK293 cells)<sup>[1]</sup>

**In Vitro:** BMS-299897 reduces the levels of each of the A $\beta$  peptides. At 1  $\mu$ M, BMS-299897 decreases these peptides to levels

ranging from 20 to 50% of the vehicle control. 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].

**In Vivo:** BMS-299897 shows dose- and time-dependent reductions of amyloid  $\beta$ -peptide ( $A\beta$ ) in brain, cerebrospinal fluid (CSF), and plasma in young transgenic mice, with a correlation between brain and CSF  $A\beta$  levels. BMS-299897 reduces both brain and plasma  $A\beta_{1-40}$  in APP-YAC mice and increases brain concentrations of APPcarboxy-terminal fragments, consistent with  $\gamma$ -secretase inhibition. BMS-299897, attenuates this  $A\beta_{25-35}$ -induced  $A\beta_{1-42}$  seeding and toxicity. BMS-299897 is administered at 0.1-1 nmol/mouse, concomitantly with  $A\beta_{25-35}$  (9 nmol) in male Swiss mice. After one week, the contents in  $A\beta_{1-42}$  and  $A\beta_{1-40}$ , 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.  $A\beta_{25-35}$  increases  $A\beta_{1-42}$  content (+240%) but fails to affect  $A\beta_{1-40}$ . BMS-299897 blocks the increase in  $A\beta_{1-42}$  content and decreased  $A\beta_{1-40}$  levels significantly. The compound does not affect  $A\beta_{25-35}$ -induced increase in hippocampal lipid peroxidation. Behaviorally, BMS-299897 blocks the  $A\beta_{25-35}$ -induced deficits in spontaneous alternation or novel object recognition, using a 1 h intertrial time interval. The co-administration of the  $\gamma$ -secretase inhibitor BMS-299897, in the 0.1-1  $\mu\text{mol/mouse}$  dose-range, completely blocks the  $A\beta_{25-35}$ -induced increase in  $A\beta_{1-42}$  content<sup>[1]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!