

**Product Name:** MRK 560

**Catalog No.:** 4000

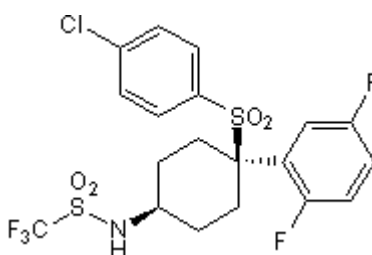
**Batch No.:** 1

CAS Number: 677772-84-8

IUPAC Name: *N*-[*cis*-4-[(4-Chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexyl]-1,1,1-trifluoromethanesulfonamide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>19</sub>H<sub>17</sub>ClF<sub>5</sub>NO<sub>4</sub>S<sub>2</sub>  
**Batch Molecular Weight:** 517.92  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
 ethanol to 50 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**TLC:** R<sub>f</sub> = 0.4 (Chloroform/Ethyl acetate [95:5])  
**HPLC:** Shows 100% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

|             | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 44.06  | 3.31     | 2.7      |
| Found       | 44.15  | 3.3      | 2.82     |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

$\gamma$ -secretase inhibitor; inhibits proteolytic cleavage of amyloid precursor protein (APP) over the Notch pathway. Reduces levels of A $\beta$  in the brain (inhibits A $\beta$ 40 and A $\beta$ 42 in SH-SY5Y neuroblastoma cells with an IC<sub>50</sub> of 0.65 nM); attenuates plaque deposition. Orally bioavailable.

**Physical and Chemical Properties:**

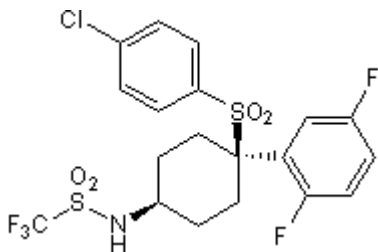
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Batch Molecular Weight: 517.92

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 50 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Best et al** (2006) In vivo characterization of A $\beta$ (40) changes in brain and cerebrospinal fluid using the novel  $\gamma$ -secretase inhibitor *N*-[*cis*-4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexyl]-1,1,1-trifluoromethanesulfonamide (MRK-560) in the rat. *J.Pharm.Exp.Ther.* **317** 786. PMID: 16443723.

**Best et al** (2007) The novel  $\gamma$ -secretase inhibitor *N*-[*cis*-4-[(4-chlorophenyl)sulfonyl]-4-(2,5-difluorophenyl)cyclohexyl]-1,1,1-trifluoromethanesulfonamide (MRK-560) reduces amyloid plaque deposition without evidence of Notch-related pathology in the Tg2576 mouse. *J.Pharm.Exp.Ther.* **320** 552. PMID: 17099072.

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