

**Product Name:** GW 4869

**Catalog No.:** 6741

**Batch No.:** 2

**IUPAC Name:** 3,3'-(1,4-Phenylene)bis[N-[4-(4,5-dihydro-1H-imidazol-2-yl)phenyl]-2-propenamide] ditrifluoroacetate

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>30</sub>H<sub>28</sub>N<sub>6</sub>O<sub>2</sub>·2CF<sub>3</sub>COOH·H<sub>2</sub>O

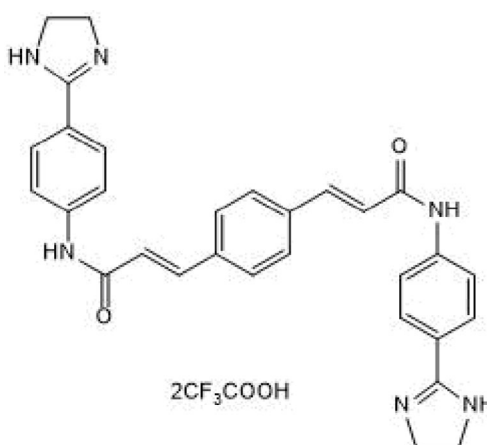
**Batch Molecular Weight:** 750.66

**Physical Appearance:** Off White solid

**Solubility:** DMSO to 2 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 98.0% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	54.4	4.3	11.2
Found	53.58	4.01	11

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

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**Description:**

GW 4869 is a selective neutral sphingomyelin phosphodiesterase (N-SMase) inhibitor ( $IC_{50} = 1 \mu M$ ). Exhibits selectivity for neutral sphingomyelinase over acid sphingomyelinase (a-SMase) at concentrations up to 150  $\mu M$  as well as B. cereus PC-PLC, human lyso-PAF PLC, and bovine PP2A at 10  $\mu M$ . Blocks exosome biogenesis. Inhibits TNF- $\alpha$ -induced sphingomyelin hydrolysis and TNF- $\alpha$ -induced cell death in MCF-7 cells. Reverses hypoxia-induced pulmonary vasoconstriction in rats. Neuroprotective.

**Physical and Chemical Properties:**

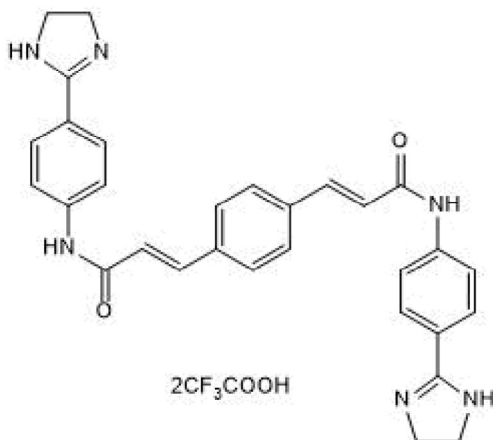
Batch Molecular Formula:  $C_{30}H_{28}N_6O_2 \cdot 2CF_3COOH \cdot H_2O$

Batch Molecular Weight: 750.66

Physical Appearance: Off White solid

**Minimum Purity:**  $\geq 90\%$

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

DMSO to 2 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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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:**

**Lallemand et al** (2018) NSMase2 (type 2-neutral sphingomyelinase) deficiency or inhibition by GW4869 reduces inflammation and atherosclerosis in apoe -/- mice. *Arterioscler.Thromb.Vasc.Biol.* **38** 1479. PMID: 29794115.

**Essandoh et al** (2015) Blockade of exosome generation with GW4869 dampens the sepsis-induced inflammation and cardiac dysfunction. *Biochim.Biophys.Acta* **1852** 2362. PMID: 26300484.

**Figuera-Losada et al** (2015) Cambinol, a novel inhibitor of neutral sphingomyelinase 2 shows neuroprotective properties. *PLoS One* **10** e0124481. PMID: 26010541.

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