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# Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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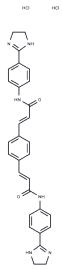
# Data Sheet (Cat.No.T3640)

TargetMol

GW4869

## Chemical Properties



CAS No. : 6823-69-4

Formula: C30H30Cl2N6O2

Molecular Weight: 577.5

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

## Biological Description

| | |
|---|---|
| Description | GW4869 (GW69A) is a selective and non-competitive inhibitor of neutral sphingomyelinase N-SMase (IC50=1 μM). GW4869 also inhibits exosome synthesis/release and is commonly used in exosome-related studies. |
| Targets(IC50) | Phospholipase |
| In vitro | **METHODS**: Human breast cancer cells MCF-7 were pretreated with GW4869 (10 μM) for 30 min, then incubated with TNF (3 nM) for 6-24 h. Ceramide levels were detected by E. coli diacylglycerol kinase assay.<br>**RESULTS**: GW4869 significantly inhibited TNF-induced ceramide accumulation, and GW4869 inhibited N-SMase. [1]<br>**METHODS**: Macrophage RAW264.7 was pretreated with GW4869 (10-20 μM) for 2 h, and then incubated with LPS (1 μg/mL) for 24 h. AchE activity was measured.<br>**RESULTS**: After pretreatment of macrophages with 10 μM GW4869, LPS-triggered exocytosis was significantly attenuated in macrophages, and the activity of AChE was reduced by 22%. Treatment with 20 μM GW4869 further enhanced this attenuation. [2] |
| In vivo | **METHODS**: To detect in vivo activity, GW4869 (2.5 μg/g) was injected intraperitoneally into C57BL/6 mice, and LPS (25 μg/g) was injected 1 h later.<br>**RESULTS**: Pretreatment of mice with GW4869 attenuated LPS-triggered production of exosomes and pro-inflammatory cytokines in the blood, thereby reducing myocardial inflammation. [2]<br>**METHODS**: To assay in vivo activity, GW4869 (200 μL of 0.3 mg/mL, 2-2.5 μg/g) was administered intraperitoneally to 5XFAD mice every two days for six weeks.<br>**RESULTS**: GW4869 reduced amyloid plaque formation in vivo by blocking exosome secretion. [3] |
| Kinase Assay | B. cereu sphosphatidylcholine-PLC is incubated in the presence or absence of 10 μM GW4869 in a reaction mixture containing 100 mM Tris, pH 7.2, 25% glycerol, 20 mM p-nitrophenyl/phosphorylcholine, and production of p-nitrophenol is quantified spectrophotometrically at 410 nm. Protein phosphatase 2A from bovine kidney is incubated in the presence or absence of GW4869 in buffer containing 50 mM Tris, pH 7.4, 1 mM dithiothreitol, 100 μM MnCl2, and 20% glycerol, and phosphatase activity is measured[1]. |
| Cell Research | GW4869 is routinely stored at ?80?°C as a 1.5 mM stock suspension in Me2SO. Right before use, the suspension is solubilized by the addition of 5% methane sulfonic acid (MSA) (2.5 μl of 5% MSA in sterile double-distilled Water are added to 50 μL of GW4869 |

stock suspension). Cells are treated with GW4869 for 30 min and then TNF is added in 10 μL/well. At the indicated time points, 25 μL of MTT stock solution are added to each well and incubated at 37?°C in 5% CO2 for 3 h. The cell viability is using the MTT assay[1].

## Solubility Information

| | |
|---|---|
| Solubility | DMSO: < 1 mg/mL (insoluble) ,Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 1.7316 mL | 8.658 mL | 17.316 mL |
| 5 mM | 0.3463 mL | 1.7316 mL | 3.4632 mL |
| 10 mM | 0.1732 mL | 0.8658 mL | 1.7316 mL |
| 50 mM | 0.0346 mL | 0.1732 mL | 0.3463 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Han X, de Dieu Habimana J, Li A L, et al. Transcription factor EB-mediated mesenchymal stem cell therapy induces autophagy and alleviates spinocerebellar ataxia type 3 defects in neuronal cells model. Cell death & disease.



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