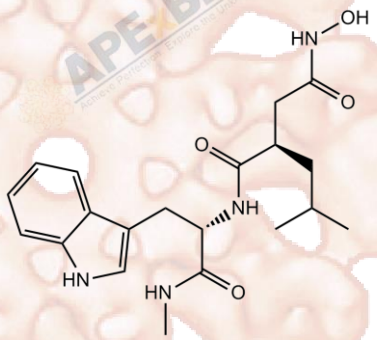
Product Data Sheet

# GM 6001




**Cat. No.:** A4050

**CAS No.:** 142880-36-2

**Formula:** C20H28N4O4

**M.Wt:** 388.46

**Synonyms:**

**Target:** Proteases

**Pathway:** MMP

**Storage:** Store at -20°C

## Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾19.42 mg/mL in DMSO

Preparing Stock Solutions

| Concentration \ Mass / Solvent | 1mg | 5mg | 10mg |
|---|---|---|---|
| **1 mM** | 2.5743 mL | 12.8713 mL | 25.7427 mL |
| **5 mM** | 0.5149 mL | 2.5743 mL | 5.1485 mL |
| **10 mM** | 0.2574 mL | 1.2871 mL | 2.5743 mL |

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

| | |
|---|---|
| Shortsummary | Broad spectrum MMP inhibitor |
| $IC_{50}$ & Target | 0.4 nM (Ki) (MMP-1), 0.5 nM (Ki) (MMP-2), 27 nM (Ki) (MMP-3), 0.1 nM (Ki) (MMP-8), 0.2 nM (Ki) (MMP-9) |

In Vitro

**Cell Viability Assay**

| | |
|---|---|
| Cell Line: | MDA-MB-435 cells |
| Preparation method: | Soluble in DMSO > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months. |
| Reacting conditions: | 1, 2, 4 nM; 6 or 12 h. |

| | | |
|---|---|---|
| | Applications: | In MDA-MB-435 cells, GM 6001 increases the respiratory rate by 80% and [3H] thymidine incorporation by 50% when treated for 6 h and 12 h respectively, which suggest that GM 6001 increase DNA synthesis. GM 6001 also increases ERK activity and p38 kinase activity. |
| In Vivo | **Animal experiment** | |
| | Animal models: | Rats with balloon injury of the carotid artery. |
| | Dosage form: | 100 mg/kg; 2, 4, 7, 10, or 14 days; IP injection. |
| | Applications: | GM 6001 reduces the amount of SMCs that migrated into the intima by 97% at 4 days after injury and inhibits lesions growth, which is mediated by MMP. However, at 14 days after injury, intimal area and the amount of SMCs were the same in GM 6001-treated and control rats. |
| | Preparation method: | Dissolved in 4% CMC. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

## Product Citations

1. Tewari BP, Chaunsali L, et al."Perineuronal nets decrease membrane capacitance of peritumoral fast spiking interneurons in a model of epilepsy." Nat Commun. 2018 Nov 9;9(1):4724.PMID:30413686
2. Lertudomphonwanit C, Mourya R, et al. "Large-scale proteomics identifies MMP-7 as a sentinel of epithelial injury and of biliary atresia." Sci Transl Med. 2017 Nov 22;9(417).PMID:29167395

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## References

[1]. Porter JF, Shen S, Denhardt DT. Tissue inhibitor of metalloproteinase-1 stimulates proliferation of human cancer cells by inhibiting a metalloproteinase. Br J Cancer, 2004, 90(2): 463-470.
[2]. Bendeck MP, Irvin C, Reidy MA. Inhibition of matrix metalloproteinase activity inhibits smooth muscle cell migration but not neointimal thickening after arterial injury. Circ Res, 1996, 78(1): 38-43.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

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