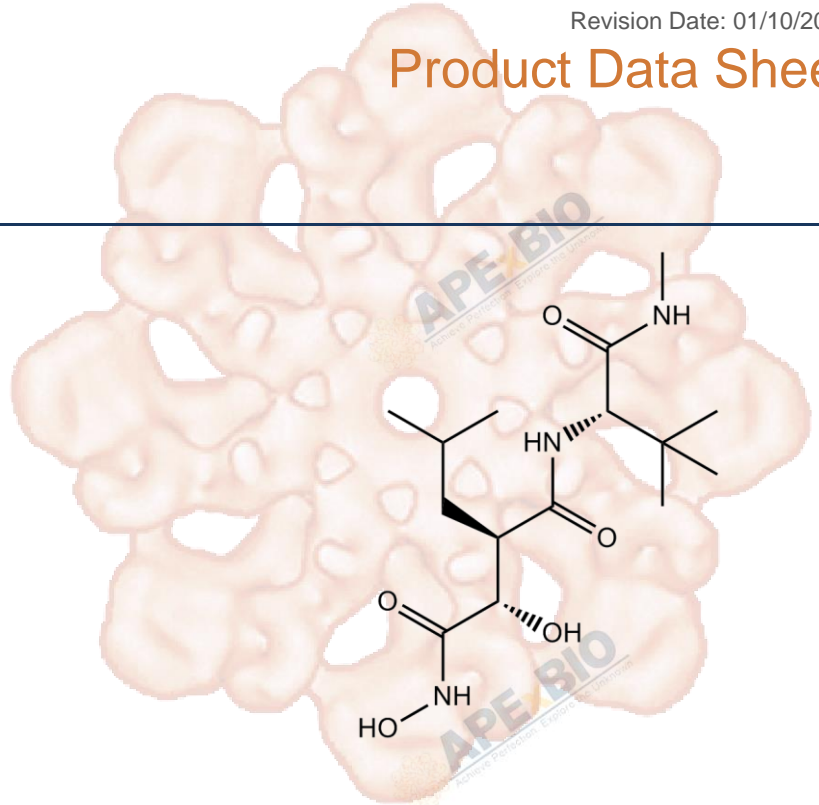


Product Data Sheet

Marimastat

| | |
|------------------|---|
| Cat. No.: | A4049 |
| CAS No.: | 154039-60-8 |
| Formula: | C ₁₅ H ₂₉ N ₃ O ₅ |
| M.Wt: | 331.41 |
| Synonyms: | |
| Target: | Proteases |
| Pathway: | MMP |
| Storage: | Store at -20°C |



Solvent & Solubility

≥2.8 mg/mL in H₂O with gentle warming and ultrasonic; ≥20.43 mg/mL in EtOH; ≥80.1 mg/mL in DMSO

In Vitro

| Preparing Stock Solutions | Solvent Concentration | Mass | | |
|------------------------------|--------------------------|-----------|------------|------------|
| | | 1mg | 5mg | 10mg |
| | 1 mM | 3.0174 mL | 15.0871 mL | 30.1741 mL |
| | 5 mM | 0.6035 mL | 3.0174 mL | 6.0348 mL |
| | 10 mM | 0.3017 mL | 1.5087 mL | 3.0174 mL |

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

Biological Activity

Shortsummary

MMPs inhibitor,board spectrum

IC₅₀ & Target

3 nM (MMP-9), 5 nM (MMP-1), 6 nM (MMP-2), 9 nM (MMP-14), 13 nM (MMP-7)

Cell Viability Assay

In Vitro

| | |
|---------------------|---|
| Cell Line: | Human glioma cell lines U251 and GaMG. |
| 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: | 0.3 μ M, 0.6 μ M, 1.0 μ M, 10 μ M and 50 μ M; 48 h or 6 days. |
| | Applications: | In co-cultures of tumor spheroids derived from human glioma cell lines U251 and GaMG with RBA, marimastat strongly inhibits tumor invasion at concentrations of 10 μ M. Marimastat (10 μ M) significantly reduces cell proliferation by 54% and completely inhibits cell growth at 50 μ M over 6 days. Also, marimastat (10 μ M) reduces U251 spheroid growth by 65%. |
| In Vivo | Animal experiment | |
| | Animal models: | Male 6-week-old C57BL6/J mice with liver fibrosis. |
| | Dosage form: | 100 mg/kg; twice daily via orogastric gavage; one week. |
| | Applications: | Marimastat significantly reduces liver injury and inflammation but induces a 25% increase in collagen deposition following acute CCl ₄ -administration. Marimastat inhibits MMP activities and reduces fibrolysis. In CCl ₄ -induced chronic hepatic injury, marimastat significantly reduces serum alanine aminotransferase (ALT) levels by 14-fold and downregulates the mRNA levels of major pro-fibrogenic genes. |
| | 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. Sapoznikov A, Gal Y, et al. "Early disruption of the alveolar-capillary barrier in a ricin-induced ARDS mouse model: neutrophil-dependent and -independent impairment of junction proteins." Am J Physiol Lung Cell Mol Physiol. 2019 Jan 1;316(1):L255-L268.PMID:30382767

See more customer validations on www.apexbt.com.

References

- [1]. Tonn JC, Kerkau S, Hanke A, et al. Effect of synthetic matrix-metalloproteinase inhibitors on invasive capacity and proliferation of human malignant gliomas in vitro. Int J Cancer, 1999, 80(5): 764-772.
- [2]. de Meijer VE, Sverdlov DY, Popov Y, et al. Broad-spectrum matrix metalloproteinase inhibition curbs inflammation and liver injury but aggravates experimental liver fibrosis in mice. PLoS One, 2010, 5(6): e11256.

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 APEX[®]BIO 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.



APExBIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

