

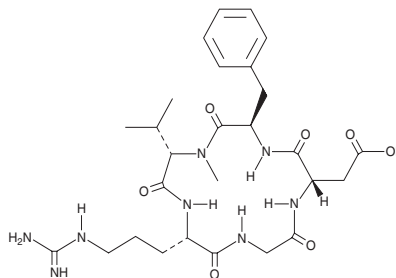
# PRODUCT INFORMATION



## Cilengitide

Item No. 22289

**CAS Registry No.:** 188968-51-6  
**Formal Name:** cyclo(L-arginylglycyl-L- $\alpha$ -aspartyl-D-phenylalanyl-N-methyl-L-valyl)  
**Synonym:** EMD 121974  
**MF:** C<sub>27</sub>H<sub>40</sub>N<sub>8</sub>O<sub>7</sub>  
**FW:** 588.7  
**Purity:**  $\geq$ 98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Cilengitide is supplied as a crystalline solid. A stock solution may be made by dissolving the cilengitide in the solvent of choice, which should be purged with an inert gas. Cilengitide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of cilengitide in these solvents is approximately 1, 20, and 30 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of cilengitide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cilengitide in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Cilengitide is a cyclo-(Arg-Gly-Asp-D-Phe-Val) (cRGDFv) peptide and integrin  $\alpha$ V $\beta$ 3 receptor antagonist.<sup>1</sup> It inhibits adhesion and induces apoptosis of U87MG and U373MG malignant glioma (MG) cells, but not U251MG cells that lack the integrin  $\alpha$ V $\beta$ 3 receptor, *in vitro* at a concentration of 20  $\mu$ g/ml. Cilengitide (200  $\mu$ g/animal per day) delays tumor implantation time, reduces tumor growth, and prolongs survival in a U87MG mouse model of glioblastoma.<sup>2</sup>

### References

1. Chatterjee, S., Matsumura, A., Schradermeier, J., *et al.* Human malignant glioma therapy using anti- $\alpha$ V $\beta$ <sub>3</sub> integrin agents. *J. Neurooncol.* **46(2)**, 135-144 (2000).
2. Yamada, S., Bu, X.-Y., Khankaldyyan, V., *et al.* Effect of the angiogenesis inhibitor cilengitide (EMD 121974) on glioblastoma growth in nude mice. *Neurosurgery* **59(6)**, 1304-1312 (2006).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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