

## Certificate of Analysis

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**Product Name:** Cilengitide

**Catalog No.:** 5870

**Batch No.:** 4

CAS Number: 188968-51-6

### 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>27</sub> H <sub>40</sub> N <sub>8</sub> O <sub>7</sub>
<b>Batch Molecular Weight:</b>	588.66
<b>Physical Appearance:</b>	White solid
<b>Net Peptide Content:</b>	91%
<b>Solubility:</b>	Soluble to 10 mg/ml in water
<b>Storage:</b>	Store at -20°C
<b>Peptide Sequence:</b>	cyclo(Arg-Gly-Asp-D-Phe-NMe-Val)

### 2. ANALYTICAL DATA

<b>HPLC:</b>	Shows 99.6% purity
<b>Mass Spectrum:</b>	Consistent with structure

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

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**4**

CAS Number: 188968-51-6

**Description:**

Cilengitide is a potent and selective inhibitor of integrins  $\alpha_v\beta_3$  and  $\alpha_v\beta_5$  (IC<sub>50</sub> values are 4.1 and 70 nM, respectively). Exhibits ~10-fold selectivity over gpIIb/IIIa. Increases endothelial monolayer permeability. Also exhibits antiangiogenic activity.

**Physical and Chemical Properties:**

Batch Molecular Formula: C<sub>27</sub>H<sub>40</sub>N<sub>8</sub>O<sub>7</sub>

Batch Molecular Weight: 588.66

Physical Appearance: White solid

**Peptide Sequence:**

cyclo(Arg-Gly-Asp-D-Phe-NMe-Val)

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 10 mg/ml in water

**Net Peptide Content:** 91% (Remaining weight made up of counterions and residual water).

**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).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

**References:**

**Alghisi *et al*** (2009) The integrin antagonist cilengitide activates  $\alpha_v\beta_3$ , disrupts VE-cadherin localization at cell junctions and enhances permeability in endothelial cells. *PLoS One* **4** e4449. PMID: 19212436.

**Monnier *et al*** (2008) CYR61 and  $\alpha_v\beta_5$  integrin cooperate to promote invasion and metastasis of tumors growing in preirradiated stroma. *Cancer Res.* **68** 7323. PMID: 18794119.

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