

## Certificate of Analysis

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**Product Name:** Gly-Pro-Arg-Pro

**Catalog No.:** 1805

**Batch No.:** 1

CAS Number: 67869-62-9

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>18</sub>H<sub>31</sub>N<sub>7</sub>O<sub>5</sub>  
**Batch Molecular Weight:** 425.49  
**Physical Appearance:** White lyophilised solid  
**Net Peptide Content:** 67%  
**Storage:** Desiccate at -20°C  
**Peptide Sequence:** Gly-Pro-Arg-Pro

### 2. ANALYTICAL DATA

**HPLC:** Shows >95% purity

### 3. AMINO ACID ANALYSIS DATA

| Amino Acid Theoretical |      | Actual | Amino Acid Theoretical |      | Actual |
|------------------------|------|--------|------------------------|------|--------|
| Ala                    |      |        | Lys                    |      |        |
| Arg                    | 1.00 | 1.00   | Met                    |      |        |
| Asx                    |      |        | Phe                    |      |        |
| Cys                    |      |        | Pro                    | 2.00 | 2.00   |
| Glx                    |      |        | Ser                    |      |        |
| Gly                    | 1.00 | 1.00   | Thr                    |      |        |
| His                    |      |        | Trp                    |      |        |
| Ile                    |      |        | Tyr                    |      |        |
| Leu                    |      |        | Val                    |      |        |

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

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**Description:**

Inhibitor of fibrin polymerization; binds to fibrinogen ( $K_i = 400$  mM). Anticoagulant.

**Physical and Chemical Properties:**

Batch Molecular Formula:  $C_{18}H_{31}N_7O_5$

Batch Molecular Weight: 425.49

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Gly-Pro-Arg-Pro

**Storage:** Desiccate at  $-20^{\circ}\text{C}$

**Solubility & Usage Info:**

Most peptides are soluble in distilled water. If the peptide does not completely dissolve addition of 0.1M acetic acid (those containing Arg, Lys, His) or 0.1M ammonia (those containing Asp, Glu) may help. Occasionally 10% DMSO or DMF may be required for extremely insoluble peptides. In addition to these measures sonification may also be helpful.

This product is supplied as a lyophilised solid and may be very hard to visualise. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Net Peptide Content:** 67% (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  $45-60^{\circ}\text{C}$  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 as 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  $-20^{\circ}\text{C}$ . 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  $0.2\ \mu\text{m}$  filter to remove potential bacterial contamination whenever possible.

**References:**

**Laudano and Doolittle** (1978) Synthetic peptide derivatives that bind to fibrinogen and prevent the polymerization of fibrin monomers Proc.Natl.Acad.Sci.U.S.A. **75** 3085. PMID: 277910.

**Laudano and Doolittle** (1980) Studies on synthetic peptides that bind to fibrinogen and prevent fibrin polymerization. Structural requirements, number of binding sites, and species differences. Biochemistry **19** 1013. PMID: 7356959.

**Hsieh et al** (1981) Fibrin polymerization. 1. Alkylating peptide inhibitors of fibrin polymerization. J.Med.Chem. **24** 322. PMID: 7265118.

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