

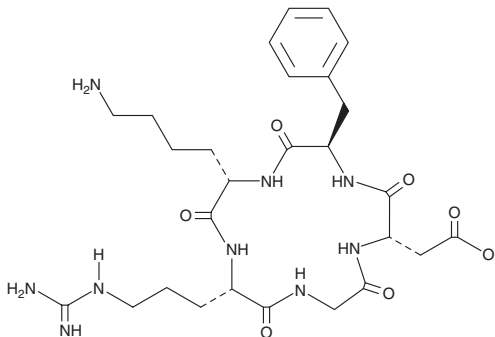
# PRODUCT INFORMATION



## Cyclo(RGDfK)

Item No. 29514

**CAS Registry No.:** 161552-03-0  
**Formal Name:** cyclo(L-arginylglycyl-L- $\alpha$ -aspartyl-D-phenylalanyl-L-lysyl)  
**Synonym:** Cyclo(Arg-Gly-Asp-D-Phe-Lys)  
**MF:** C<sub>27</sub>H<sub>41</sub>N<sub>9</sub>O<sub>7</sub>  
**FW:** 603.7  
**Purity:**  $\geq$ 95%  
**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

Cyclo(RGDfK) is supplied as a crystalline solid. A stock solution may be made by dissolving the cyclo(RGDfK) in the solvent of choice, which should be purged with an inert gas. Cyclo(RGDfK) is soluble in the organic solvent DMSO at a concentration of approximately 15 mg/ml.

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 cyclo(RGDfK) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of cyclo(RGDfK) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Cyclo(RGDfK) is a synthetic lipopeptide inhibitor of  $\alpha$ v $\beta$ 3 integrin ( $IC_{50}$  = 1.33 nM).<sup>1</sup> Osteoblast cultures, which express  $\alpha$ v $\beta$ 5 and  $\alpha$ v $\beta$ 3 integrins, but not M21L cells that do not express these integrins, bind to cyclo(RGDfK)-coated surfaces. Cyclo(RGDfK) is taken up into tumors *in vivo* and *in vitro* and it has been polymerized or conjugated to various fluorophores, radiolabels, and peptide sequences for use in fluorescent and PET imaging to study tumor cell adhesion.<sup>1-3</sup>

### References

- Šimeček, J., Notni, J., Kapp, T.G., *et al.* Benefits of NOPO as chelator in gallium-68 peptides, exemplified by preclinical characterization of <sup>68</sup>Ga-NOPO-c(RGDfK). *Mol. Pharm.* **11**(5), 1687-1695 (2014).
- Dijkgraaf, I., Beer, A.J., and Wester, H.-J. Application of RGD-containing peptides as imaging probes for  $\alpha$ v $\beta$ 3 expression. *Front. Biosci. (Landmark Ed.)* **14**(3), 887-899 (2009).
- Janssen, M., Oyen, W.J.G., Massuger, L.F.A.G., *et al.* Comparison of a monomeric and dimeric radiolabeled RGD-peptide for tumor targeting. *Cancer Biother. Radiopharm.* **17**(6), 641-646 (2002).

#### 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.

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