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# Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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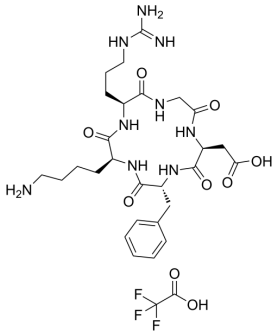
# Cyclo(-RGDfK) TFA



| | |
|---|---|
| **Cat. No.:** | HY-P0023A |
| **CAS No.:** | 500577-51-5 |
| **Molecular Formula:** | $C_{29}H_{42}F_3N_9O_9$ |
| **Molecular Weight:** | 717.69 |
| **Sequence Shortening:** | Cyclo(RGDFK) |
| **Target:** | Integrin |
| **Pathway:** | Cytoskeleton |
| **Storage:** | Sealed storage, away from moisture<br>Powder -80°C 2 years<br>-20°C 1 year<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture) |

## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 100 mg/mL (139.34 mM; Need ultrasonic)
$H_2O$ : 33.33 mg/mL (46.44 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 1.3934 mL | 6.9668 mL | 13.9336 mL |
| | 5 mM | 0.2787 mL | 1.3934 mL | 2.7867 mL |
| | 10 mM | 0.1393 mL | 0.6967 mL | 1.3934 mL |

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

**In Vivo**

1. Add each solvent one by one: PBS
   Solubility: 130 mg/mL (181.14 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (2.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (2.90 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (2.90 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Cyclo(-RGDfK) TFA is a potent and selective inhibitor of the $\alpha_v\beta_3$ integrin, with an $IC_{50}$ of 0.94 nM[1]. Cyclo(-RGDfK) TFA potently targets tumor microvasculature and cancer cells through the specific binding to the αvβ3 integrin on the cell surface[3].

| | |
|---|---|
| **$IC_{50}$ & Target** | αvβ3<br>0.94 nM ($IC_{50}$) |
| **In Vitro** | Cyclo(-RGDfK) is a potent and selective inhibitor of the $\alpha_v\beta_3$ integrin and exhibits a $IC_{50}$ of 0.94 nM[1].<br>[$^{66}$Ga]DOTA-E-[c(RGDfK)]2 can be prepared with high radiochemical purity (>97%), specific activity (36-67GBq/μM), in vitro stability, and moderate protein binding. MicroPET imaging up to 24 post-injection showed contrasting tumors reflecting $\alpha_v\beta_3$-targeted tracer accumulation[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## CUSTOMER VALIDATION

- Bioact Mater. 2021 Jan 7;6(7):2039-2057.
- Engineering. 8 October 2020.
- Adv Healthc Mater. 2021 May 29;e2100304.
- Acta Biomater. 2021 Mar 9;S1742-7061(21)00152-5.
- ACS Appl Mater Interfaces. 2019 Jul 31;11(30):26648-26663.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Simecek J, et al. Benefits of NOPO as chelator in gallium-68 peptides, exemplified by preclinical characterization of (68)Ga-NOPO-c(RGDfK). Mol Pharm. 2014 May 5;11(5):1687-95.

[2]. Lopez-Rodriguez V, et al. Preparation and preclinical evaluation of (66)Ga-DOTA-E(c(RGDfK))2 as a potential theranostic radiopharmaceutical. Nucl Med Biol. 2015 Feb;42(2):109-14.



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