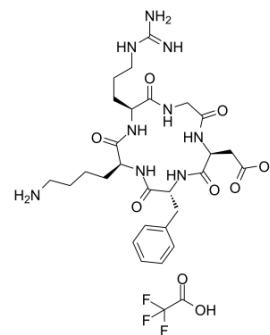


Cyclo(-RGDfK) TFA

Cat. No.:	HY-P0023A	
CAS No.:	500577-51-5	
Molecular Formula:	C ₂₉ H ₄₂ F ₃ N ₉ O ₉	
Molecular Weight:	717.69	
Sequence:	Cyclo(Arg-Gly-Asp-Phe-Lys)	
Sequence Shortening:	Cyclo(RGDfK)	
Target:	Integrin	
Pathway:	Cytoskeleton	
Storage:	Powder	-80°C 2 years
		-20°C 1 year
	In solvent	-80°C 6 months
		-20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (139.34 mM; Need ultrasonic)
 H₂O : 33.33 mg/mL (46.44 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	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

- 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
- 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
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (2.90 mM); Clear solution
- Add each solvent one by one: PBS
Solubility: 130 mg/mL (181.14 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Cyclo(-RGDfK) TFA is a potent and selective inhibitor of the α_vβ₃ integrin, with an IC₅₀ of 0.94 nM^[1]. Cyclo(-RGDfK) TFA potently targets tumor microvasculature and cancer cells through the specific binding to the α_vβ₃ integrin on the cell

	surface ^[3] .
IC ₅₀ & Target	IC ₅₀ : 0.94 nM ($\alpha_v\beta_3$ integrin) ^[1]
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] . [⁶⁶ Ga]DOTA-E-[c(RGDFK)] ₂ can be prepared with high radiochemical purity (>97%), specific activity (36-67GBq/ μ M), 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] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- ACS Appl Mater Interfaces. 2019 Jul 31;11(30):26648-26663.

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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.

Caution: Product has not been fully validated for medical applications. For research use only.

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