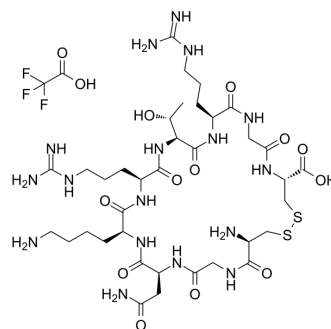


LyP-1 TFA

Cat. No.: HY-P2526A
Molecular Formula: C₃₈H₆₆F₃N₁₇O₁₄S₂
Molecular Weight: 1106.16
Sequence Shortening: CGNKRTRGC (Disulfide bridge: Cys1-Cys9)
Target: Others
Pathway: Others
Storage: Sealed storage, away from moisture
 Powder -80°C 2 years
 -20°C 1 year



* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (90.40 mM; Need ultrasonic)
 H₂O : 100 mg/mL (90.40 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	0.9040 mL	4.5201 mL	9.0403 mL
5 mM	0.1808 mL	0.9040 mL	1.8081 mL
10 mM	0.0904 mL	0.4520 mL	0.9040 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: ≥ 2.5 mg/mL (2.26 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (2.26 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (2.26 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LyP-1 TFA is a cyclic 9-amino acids tumor homing peptide and selectively bind to p32 receptors overexpressed in various tumor-associated cells^[1].

In Vivo

LyP-1 TFA (8 weeks) shows a remarkable reduction in plaque formation and plaque occupation rates in the LyP-1-treated group. In addition, a higher apoptotic rate in macrophages released from hypoxic plaques is observed after the treatment of LyP-1 when compared to control peptide^[1].

The LyP-1 peptide is labeled with a near-infrared fluorophore (Cy5.5) for optical imaging. At days 3, 7, 14 and 21 after inoculation with 4T1 cells, tumor-bearing BALB/C mice is injected Cy5.5-LyP-1 (0.8 nmol) through the middle phalanges of the upper extremities of the tumor-bearing mice. The fluorescence intensities were 0.024, 0.038, 0.048 and 0.106×10^6 photon/cm²/sec respectively at days 3, 7, 14 and 21 after tumor cell inoculation, which are 1.02, 1.63, 2.04, and 4.52-fold higher than in the contralateral LNs. Cy5.5-LyP-1 staining in LNs co-localized with LYVE-1, suggesting lymphatics-specific binding of LyP-1 peptide^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Fan Zhang, et al. Imaging tumor-induced sentinel lymph node lymphangiogenesis with LyP-1 peptide. *Amino Acids*. 2012 Jun;42(6):2343-51.
- [2]. Ningning Song, et al. Recent progress in LyP-1-based strategies for targeted imaging and therapy. *Drug Deliv*. 2019 Dec;26(1):363-375.
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Caution: Product has not been fully validated for medical applications. For research use only.

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