GPLGIAGQ TFA

Cat. No.: HY-P2213A

Molecular Formula: $C_{33}H_{54}F_3N_9O_{12}$

Molecular Weight: 825.83

Sequence: Gly-Pro-Leu-Gly-Ile-Ala-Gly-Gln

Sequence Shortening: GPLGIAGQ

Target: Apoptosis; MMP

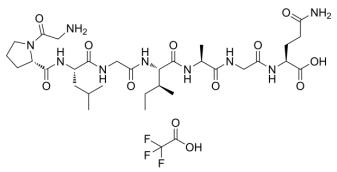
Pathway: Apoptosis; Metabolic Enzyme/Protease

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 : 50 mg/mL (60.55 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.2109 mL	6.0545 mL	12.1090 mL
	5 mM	0.2422 mL	1.2109 mL	2.4218 mL
	10 mM	0.1211 mL	0.6055 mL	1.2109 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (3.03 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.03 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

GPLGIAGQ TFA, a MMP2-cleavable polypeptide, is used as a stimulus-sensitive linker in both liposomal and micellar nanocarriers for MMP2-triggered tumor targeting. GPLGIAGQ TFA can be used to synthesis unique MMP2-targeted photosensitizer in photodynamic therapy (PDT)[1][2][3].

IC_{50} & Target

MMP2[1].

In Vitro	GPLGIAGQ is used to trigger PEG deshielding of liposomal carriers, resulting in enhanced cellular internalization[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Hou W, et al. MMP2-Targeting and Redox-Responsive PEGylated Chlorin e6 Nanoparticles for Cancer Near-Infrared Imaging and Photodynamic Therapy. ACS Appl Mater Interfaces. 2016 Jan 20;8(2):1447-57.

[2]. Zhu L, et al. Matrix metalloproteinase 2-sensitive multifunctional polymeric micelles for tumor-specific co-delivery of siRNA and hydrophobic drugs. Biomaterials. 2014 Apr;35(13):4213-22.

[3]. Liu FH, et al. Enzyme-sensitive cytotoxic peptide-dendrimer conjugates enhance cell apoptosis and deep tumor penetration. Biomater Sci. 2018 Feb 27;6(3):604-613.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA