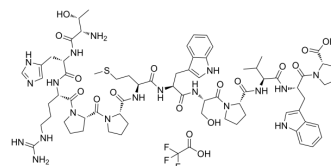


TfR-T12 TFA

Cat. No.:	HY-P2297A
Molecular Formula:	C ₇₃ H ₁₀₀ F ₃ N ₁₉ O ₁₇ S
Molecular Weight:	1604.75
Sequence:	Thr-His-Arg-Pro-Pro-Met-Trp-Ser-Pro-Val-Trp-Pro
Sequence Shortening:	THRPPMWSPWWP
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture and light
	Powder -80°C 2 years
	-20°C 1 year



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

SOLVENT & SOLUBILITY

In Vitro

H₂O : 100 mg/mL (62.32 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	0.6231 mL	3.1158 mL	6.2315 mL
	5 mM	0.1246 mL	0.6231 mL	1.2463 mL
	10 mM	0.0623 mL	0.3116 mL	0.6231 mL

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

BIOLOGICAL ACTIVITY

Description

TfR-T12 TFA is a BBB-penetrated transferrin receptor (TfR) binding peptide, displaying a binding affinity in the nM range^{[1][2]}.

In Vitro

TfR-T12 binds to the TfR and is subsequently internalized into TfR-expressing cells^[1]. TfR-T12 is a synthetic peptide obtained by phage display, and is able to bind a different site on TfRs compared with transferrin. TfR-T12 can be chemically conjugated with a pegylated lipid derivative, 3-(N-succinimidylxyglutaryl)aminopropyl- polyethyleneglycol(2000)- carbamyl distearoyl phosphatidylethanolamine (NHS-PEG2000-DSPE), and used as a functional material to construct the multifunctional lipid vesicles^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Carmen Wängler, et al. In Vitro and Initial in Vivo Evaluation of (68)Ga-labeled Transferrin Receptor (TfR) Binding Peptides as Potential Carriers for Enhanced Drug

Transport Into TfR Expressing Cells. Mol Imaging Biol. 2011 Apr;13(2):332-41.

[2]. Li-Min Mu, et al. Lipid Vesicles Containing Transferrin Receptor Binding Peptide TfR-T 12 and Octa-Arginine Conjugate stearyl-R 8 Efficiently Treat Brain Glioma Along With Glioma Stem Cells. Sci Rep. 2017 Jun 14;7(1):3487.

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

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