Parstatin(mouse) TFA

Cat. No.: HY-P1261A

Molecular Formula: $C_{191}H_{327}F_3N_{58}O_{59}S_3$

Molecular Weight: 4533.18

Sequence Shortening: MGPRRLLIVALGLSLCGPLLSSRVPMSQPESERTDATVNPR

MGPRRLLIVALGLSLCGPLLSSRVPMSQPESERTDATVNPR (TFA salt)

Target: Protease Activated Receptor (PAR)

Pathway: GPCR/G Protein

Storage: Sealed storage, away from moisture and light, under nitrogen

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, under nitrogen)

SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (22.06 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	0.2206 mL	1.1030 mL	2.2060 mL
5 mM	0.0441 mL	0.2206 mL	0.4412 mL
10 mM	0.0221 mL	0.1103 mL	0.2206 mL

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

BIOLOGICAL ACTIVITY

Description

Parstatin(mouse) TFA, a cell-penetrating PAR-1 thrombin receptor agonist peptide, is a potent inhibitor of angiogenesis[1][2].

IC_{50} & Target

PAR1

In Vitro

Parstatin (0-10 μM) increases recovery of LVDP in a concentration-dependent manner. The optimal concentration was 1 μM which produced a 23% recovery of LVDP[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Parstatin (single dose, 1-25 μg/kg, iv) administered prior to ischaemia confers immediate cardioprotection by recruiting the Gi-protein activation pathway including p38 MAPK, ERK1/2, NOS, and KATP channels. Parstatin exerts effects on both the cardiomyocytes and the coronary circulation to induce cardioprotection. This suggests a potential therapeutic role of parstatin in the treatment of cardiac injury resulting from ischaemia and reperfusion[1].

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Animal Model:	Male Sprague–Dawley rats at 8 weeks of age (250-300 g)[1].
Dosage:	1-25 μg/kg.
Administration:	IV injected 15 min prior to ischaemia.
Result:	A significant decrease in infarct size was detected with the 5-15 μg/kg doses with 10 μg/kg as the optimal dose. These hearts had an infarct size of 46 ± 3% of the area at risk, which is a 26% reduction in infarct size compared with the control.

REFERENCES

[1]. Panagiota Zania, et al. Parstatin, the Cleaved Peptide on Proteinase-Activated Receptor 1 Activation, Is a Potent Inhibitor of Angiogenesis. J Pharmacol Exp Ther. 2009 Feb;328(2):378-89.

[2]. Jennifer L Strande, et al. Parstatin: A Cryptic Peptide Involved in Cardioprotection After Ischaemia and Reperfusion Injury. Cardiovasc Res. 2009 Jul 15;83(2):325-34.

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