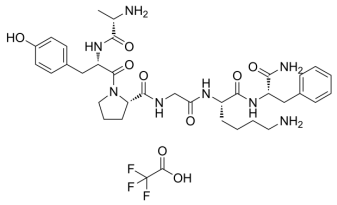
PAR-4 Agonist Peptide, amide TFA

Cat. No.:	HY-P1309A
CAS No.:	1228078-65-6
Molecular Formula:	$C_{36}H_{49}F_3N_8O_9$
Molecular Weight:	794.82
Sequence:	Ala-Tyr-Pro-Gly-Lys-Phe-NH2
Sequence Shortening:	AYPGKF-NH2
Target:	Protease Activated Receptor (PAR)
Pathway:	GPCR/G Protein
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 : ≥ 250 mg/mL (314.54 mM)

H_2O : 100 mg/mL (125.81 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.2581 mL	6.2907 mL	12.5815 mL
	5 mM	0.2516 mL	1.2581 mL	2.5163 mL
	10 mM	0.1258 mL	0.6291 mL	1.2581 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (62.91 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (2.62 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (2.62 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (2.62 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PAR-4 Agonist Peptide, amide TFA (PAR-4-AP TFA; AY-NH2 TFA) is a proteinase-activated receptor-4 (PAR-4) agonist, which

	has no effect on either PAR-1 or PAR-2 and whose effects are blocked by a PAR-4 antagonist[1].
IC_{50} & Target	PAR4
In Vivo	Compared with their BALB/cBy controls, SCID mice have a significantly greater abdominal response to colorectal distension (CRD) at the distension levels of 0.04 to 0.1 mL increasing the intensity of EMG response by 384% to 132%, respectively (P<0.01; P<0.01; P<0.01; P<0.001). PAR-4 activation effectively reverses this hypersensitivity (P<0.01, P<0.05; P<0.05; P<0.05) [1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice[1] SCID mice Male SCID mice and their BALB/cBy controls are operated as C57BL/6J mice, and on the 4th postoperative day mice receive intracolonically (IC) infusion of 100 μg PAR-4-AP or vehicle. Visceral pain measurements started 1 h following the end of infusion[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Mol Nutr Food Res. 2022 May 1;e2200166.

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REFERENCES

[1]. Annházi A, et al. Proteinase-activated receptor-4 evoked colorectal analgesia in mice: an endogenously activatedfeed-back loop in visceral inflammatory pain. Neurogastroenterol Motil. 2012 Jan;24(1):76-85, e13.

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

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