Adrenomedullin (1-50), rat

Cat. No.: HY-P1534

Molecular Formula: $C_{242}H_{381}N_{77}O_{75}S_5$

Molecular Weight: 5729.5

Sequence: Tyr-Arg-Gln-Ser-Met-Asn-Gln-Gly-Ser-Arg-Ser-Thr-Gly-Cys-Arg-Phe-Gly-Thr-Cys-Thr-Met-Gln-Lys-Leu-Ala-His-Gln-Ile-Tyr-Gln-Phe-Thr-Asp-Lys-Asp-Lys-Asp-Gly-Met-Ala-Pro-Arg-Asn-Lys-Ile-Ser-Pro-Gln-Gly-Tyr-NH2 (Disulfide bridge: Cys14-Cys19)

Sequence Shortening: YRQSMNQGSRSTGCRFGTCTMQKLAHQIYQFTDKDKDGMAPRNKISPQGY-NH2 (Disulfide bridge: Cys14-Cys19)

Target: CGRP Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

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)

BIOLOGICAL ACTIVITY

Description	Adrenomedullin (1-50), rat is a 50 amino acid peptide, which induces a selective arterial vasodilation via activation of CGRP1 receptor.
IC_{50} & Target	CGRP1 receptor[1]
In Vitro	Adrenomedullin (1-50), rat is a 50 amino acid peptide, which induces a selective arterial vasodilation via activation of CGRP1 receptor[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Adrenomedullin (1-50), rat causes a dose-dependent and endothelium-independent vasodilation on the arterial mesenteric vasculature, and this effect is inhibited by CGRP1 receptor antagonist. Adrenomedullin (1-50), rat activates CGRP1 receptor in the double-perfused mesenteric bed of the rat[1]. Adrenomedullin (1-50) ameliorates pulmonary vascular structural remodeling of hypoxic rats with incresed plasma NO and H(2)S concentrations. Adrenomedullin (1-50) also regulates the development of hypoxic pulmonary hypertension and hypoxic pulmonary vascular structural remodeling, through promoting NO and H(2)S production in hypoxic rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Rats[1] Male albino Wistar rats (250-350 g) are used in the assay. Following an equilibration period of 45 min, the vasoactive effect of Adrenomedullin (1-50), rat, rADM (11-50), acetylcholine (ACh), and bradykinin (BK) is evaluated. The perfusion pressure on both sides of the mesenteric circulation is increased by infusing either a sympathomimetic, methoxamine (100 μM), on the arterial side or a thromboxomimetic, U46619 (0.5 μM), on the venous side. When a plateau is reached, the agents (

Adrenomedullin (1-50), rat, etc.) are administered by bolus injections (1 to 45 µL). Vasodilator responses are expressed as percent reduction of induced tone on both sides of the mesenteric vasculature. In some experiments, the effects of the CGRP1 receptor antagonist $hCGRP_{8-37}$ and of the nitric oxide synthase inhibitor L-NAME are evaluated. They are infused 15 and 30 min, respectively, before the administration of the agonists[1].

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

REFERENCES

[1]. Berthiaume N, et al. Rat adrenomedullin induces a selective arterial vasodilation via CGRP1 receptors in the double-perfused mesenteric bed of the rat. Can J Physiol Pharmacol. 1995 Jul;73(7):1080-3.

[2]. Qi JG, et al. Effect of adrenomedullin 1-50 on chronic hypoxic pulmonary hypertension in rats. Beijing Da Xue Xue Bao Yi Xue Ban. 2006 Apr 18;38(2):151-4.

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