Neuropeptide AF (cattle)

Cat. No.:	HY-P3843
CAS No.:	99588-52-0
Molecular Formula:	$C_{89}H_{130}N_{24}O_{24}$
Molecular Weight:	1920.13
Sequence Shortening:	AGEGLSSPFWSLAAPQRF-NH2
Target:	Mas-related G-protein-coupled Receptor (MRGPR); Neuropeptide Y Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Neuropeptide AF (cattle), an amidated octadecapeptide, is RFamide neuropeptide. Neuropeptide AF (cattle) acts as a ligand of Mas-related gene receptor A4 (MrgprA4) (Mas-related G-protein-coupled Receptor (MRGPR)) (EC_{50} of ~60 nM) and MrgprC11 (EC_{50} of ~300 nM). Neuropeptide AF (cattle) also activate to the G protein-coupled receptors NPFF1 (Neuropeptide Y Receptor) (EC_{50} of ~25-325 nM) and NPFF2 (EC_{50} of ~1-5 nM). Neuropeptide AF (cattle) shows anti-opiate and related pain modulation effects[1][2].

In Vitro

Neuropeptide AF (NPAF) (50, 100, 150, 300, and 600nM) induces a piecemeal degranulation in bone marrow-derived mucosal mast cells (BMMCs). Neuropeptide AF can be considered as a novel modulator of BMMC activity in the neuro-immune communication in the gastrointestinal tract[1].

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

In Vivo

Neuropeptide AF (cattle) (0.25 μg/2 μL; i.c.v.; 30 min prior to the tests) decreases the immobility time and increases the climbing and swimming times in modified mouse forced swimming test (mFST)[2].

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

Animal Model:	Male CFLP mice (25-28 g)[2]
Dosage:	0.25 μg/2 μL
Administration:	i.c.v.; 30 min prior to the tests
Result:	Decreased the immobility time and increased the climbing and swimming times.

REFERENCES

[1]. Nada Abdellah, et al. Neuropeptide AF Induces Piecemeal Degranulation in Murine Mucosal Mast Cells: A New Mediator in Neuro-Immune Communication in the Intestinal Lamina Propria? Anat Rec (Hoboken). 2018 Jun;301(6):1103-1114.

[2]. Miklós Palotai, et al. Neuropeptide AF induces anxiety-like and antidepressant-like behavior in mice. Behav Brain Res. 2014 Nov 1;274:264-9.

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

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