Neuropeptide Y (human,rat,mouse) (TFA)

Cat. No.: HY-P0198A

Molecular Formula: $C_{191}H_{286}F_3N_{55}O_{59}S$

Molecular Weight: 4385.7

Sequence: Tyr-Pro-Ser-Lys-Pro-Asp-Asn-Pro-Gly-Glu-Asp-Ala-Pro-Ala-Glu-Asp-Met-Ala-Arg-Tyr-Tyr-Ser-Ala-Leu-Arg-His-Tyr-Ile-Asn-Leu-Ile-Thr-Arg-Gln-Arg-Tyr-NH2 YPSKPDNPGEDAPAEDMARYYSALRHYINLITRQRY-NH_2 (TFA salt)

Sequence Shortening: YPSKPDNPGEDAPAEDMARYYSALRHYINLITRQRY-NH2

Target: Neuropeptide Y 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)

SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (22.80 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.2280 mL	1.1401 mL	2.2801 mL
	5 mM	0.0456 mL	0.2280 mL	0.4560 mL
	10 mM	0.0228 mL	0.1140 mL	0.2280 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (22.80 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Neuropeptide Y (human) TFA is involved in Alzheimer's disease (AD) and protects rat cortical neurons against β-Amyloid toxicity.

In Vitro

It is showed that Neuropeptide Y (human) is able to protect cortical neurons from $A\beta_{25-35}$ toxicity. 2 μM NPY abolishes the toxic effects of $A\beta_{25-35}$ at 24 and 48 h. The same effect on neuronal survival is observed in neurons exposed to 1 μM and 0.5 μM Neuropeptide Y (human) pretreatments. Pretreatment with Neuropeptide Y (29-64), amide, human (TFA) Increases NGF Synthesis, reduces NGF mRNA, and restores NGF release in cortical neurons exposed to $A\beta_{35-25}$[1].

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

PROTOCOL

Cell Assay [1]

Primary cortical neurons are preincubated either alone (positive control) or with three concentrations of Neuropeptide Y (human) (NPY) (0.5, 1, and 2 μM) for 24 h and then exposed to $A\beta_{25-35}$ (50 μM) or $A\beta_{35-25}$ (50 μM) for 48 h[1].

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

REFERENCES

[1]. Croce N, et al. Neuropeptide Y protects rat cortical neurons against β-amyloid toxicity and re-establishes synthesis and release of nerve growth factor. ACS Chem Neurosci. 2012 Apr 18;3(4):312-8.

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