Neuropeptide Y (human,rat,mouse)

Cat. No.: HY-P0198

CAS No.: 90880-35-6

Molecular Formula: $C_{189}H_{285}N_{55}O_{57}S$

Molecular Weight: 4271.68

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

Sequence Shortening: YPSKPDNPGEDAPAEDMARYYSALRHYINLITRQRY-NH2

Target: Neuropeptide Y Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Sealed storage, away from moisture and light

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)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 25 mg/mL (5.85 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.2341 mL	1.1705 mL	2.3410 mL
	5 mM	0.0468 mL	0.2341 mL	0.4682 mL
	10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

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