Kinetensin

Cat. No.: HY-P1255

CAS No.: 103131-69-7

Molecular Formula: $C_{56}H_{85}N_{17}O_{11}$

Molecular Weight: 1172.38

Sequence: Ile-Ala-Arg-Arg-His-Pro-Tyr-Phe-Leu

Sequence Shortening: IARRHPYFL

Target: Neurotensin Receptor; Endogenous Metabolite

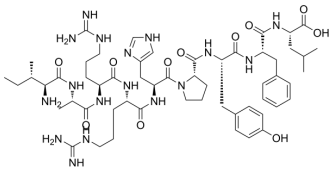
Pathway: GPCR/G Protein; Neuronal Signaling; Metabolic Enzyme/Protease

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

DMSO : 100 mg/mL (85.30 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.8530 mL	4.2648 mL	8.5297 mL
	5 mM	0.1706 mL	0.8530 mL	1.7059 mL
	10 mM	0.0853 mL	0.4265 mL	0.8530 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.13 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.13 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.13 mM); Clear solution

BIOLOGICAL ACTIVITY

Description Kinetensin is a neurotensin-like peptide isolated from pepsin-treated human plasma.

IC_{50} & Target		
	Human Endogenous Metabolite	Human Endogenous Metabolite

In Vitro	The peptide kinetensin isolated from pepsin-treated human plasma induces a dose-dependent release of histamine when exposed to rat peritoneal mast cells. The threshold concentration is around 1 μM, the ED_{50} is 10 μM, and the optimal concentration of between 100 to 1000 μM released 80% of the total histamine. Kinetensin is 10 to 100 times less potent than neurotensin and equipotent with the opioid peptide dynorphin. The histamine release is clearly temperature-dependent, with no release occurring at 0 or 45 °C and with an optimum around 37 °C. The histamine release is significantly reduced in the absence of extracellular calcium[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Kinetensin also induces a dose-dependent increase in vascular permeability when injected intradermally into rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [2]	Rat peritoneal mast cells are incubated with kinetensin at 37°C for 10 min. The incubation is stopped by the addition of 1.8 mL of ice-cold buffered saline and cells are separated from supernatant by centrifugation. Histamine release is expressed as per cent of total mast cell histamine[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [2]	Rats[2] Anesthetized Sprague-Dawley rats are given ^{25}I-albumin i.v. Samples are then injected intradermally in 5x2 spots on the back and comprised saline as a control or kinetensin in different doses in 100 μL saline. After 20 rain, skin biopsies of 7 mm diameter are cut out, weighed and transferred to a gamma-counter. Results are expressed as: (counts per min (cpm) in tissue per gram wet weight/cpm in plasma per mL plasma)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Mogard MH, et al. The amino acid sequence of kinetensin, a novel peptide isolated from pepsin-treated human plasma: homology with human serum albumin, neurotensin and angiotensin. Biochem Biophys Res Commun. 1986 May 14;136(3):983-8.

[2]. Sydbom A, et al. Stimulation of histamine release by the peptide kinetensin. Agents Actions. 1989 Apr;27(1-2):68-71.

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