L-JNKI-1

Cat. No.: HY-P0069A

Molecular Formula: $C_{164}H_{286}N_{66}O_{40}$

Molecular Weight: 3822.44

Sequence: Asp-Gln-Ser-Arg-Pro-Val-Gln-Pro-Phe-Leu-Asn-Leu-Thr-Thr-Pro-Arg-Lys-Pro-Arg-Pro-Pro-Arg-Arg-Arg-Gln-Arg-Arg-Lys-Lys-Arg-Gly-NH2 DQSRPVQPFLNLTTPRKPRPPRRRQRRKKRG-NH_2

Sequence Shortening: DQSRPVQPFLNLTTPRKPRPPRRRQRRKKRG-NH2

Target: JNK

Pathway: MAPK/ERK Pathway

Storage: Sealed storage, away from moisture

Powder	-80°C	2 years
	-20°C	1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 100 mg/mL (26.16 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.2616 mL	1.3081 mL	2.6161 mL
	5 mM	0.0523 mL	0.2616 mL	0.5232 mL
	10 mM	0.0262 mL	0.1308 mL	0.2616 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 (26.16 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description L-JNKI-1 is a cell-permeable peptide inhibitor specific for JNK.

IC_{50} & Target JNK

In Vivo L-JNKI-1 has been shown to effectively inhibit JNK activity in in vivo studies. It is shown that Ang II induces a dose-dependent pressor response, which was significantly attenuated by JNK inhibition[1]. It is also found that 10 μM L-JNKI-1 decreases phosphorylated c-Jun by 98% and phosphorylated Elk-1 by 100%. L-JNKI-1 is able to across the blood-brain barrier and penetrate neurons of adult mice and P5 rats within 1 h after an intraperitoneal injection[2].

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

PROTOCOL

Animal Administration [1]	Rats[1] Six-week-old male SD rats are used. The rats are injected with a bolus of JNK peptide inhibitor L-JNKI-1 (5 mg/kg) followed by infusion of JNKI 1 (5 mg/kg per hour) until the completion of the experiment. After a 30-minute infusion of JNK inhibitor, the pressor response to Ang II at the 3 doses described above is determined at 30-minute intervals[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- PLoS One. 2020 Mar 3;15(3):e0229499.
- Neuroreport. 2021 Sep 8;32(13):1122-1127.

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REFERENCES

[1]. Zhou MS, et al. Role of c-Jun N-terminal kinase in the regulation of vascular tone. J Cardiovasc Pharmacol Ther. 2010 Mar;15(1):78-83.

[2]. Borsello T, et al. A peptide inhibitor of c-Jun N-terminal kinase protects against excitotoxicity and cerebral ischemia. Nat Med. 2003 Sep;9(9):1180-6.

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