DA-JC4

Cat. No.:	HY-P3255
CAS No.:	2315504-40-4
Molecular Formula:	$C_{225}H_{346}N_{56}O_{65}$
Molecular Weight:	4875.49
Sequence:	Tyr-{Aib}-Glu-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Ile-Tyr-Leu-Asp-Lys-Gln-Ala-Ala-{Aib}-Glu-Phe-Val-Asn-Trp-Leu-Leu-Ala-Gly-Gly-Pro-Ser-Ser-Gly-Ala-Pro-Pro-Pro-Ser-Lys-Lys-Lys-Lys-Lys-NH2
Sequence Shortening:	Y-{Aib}-EGTFTSDYSIYLDKQAA-{Aib}-EFVNWLLAGGPSSGAPPPSKKKKKK-NH2
Target:	Insulin Receptor
Pathway:	Protein Tyrosine Kinase/RTK
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)

BIOLOGICAL ACTIVITY

Description	DA-JC4 is a dual GLP-1/GIP receptor agonist and can be used for the research of neurological disease and insulin signaling pathways[1][2][3].
IC_{50} & Target	GLP-1/GIP[1]
In Vitro	DA-JC4 (1~100 nM; hippocampal cells) inhibits rotenone-induced hippocampal neuron death and significantly suppresses Cyt C, Bax and Caspase activation[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	DA-JC4 (10 nmol/kg; i.p.; once-daily for 14 days) significantly prevents spatial learning deficits in a Y- maze test and Morris water maze tests, and decreases phosphorylated tau levels in the rat cerebral cortex and hippocampus[1]. DA-JC4 (25 nmol/kg; i.p.; 6 days) shows high levels expression of tyrosine Hydroxylase in the s. nigra and increases expression of neuroprotective growth factor Glial-Derived Neurotrophic Factor (GDNF)[2]. DA-JC4 (50 nmol/kg; i.p.; once-daily for 7 days) improves Parkinson's disease symptom potentially and enhances neurotransmission[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Sprague-Dawley rats (210–230 g)
Dosage:	10 nmol/kg
Administration:	I.p.
Result:	Significantly prevented spatial learning deficits in a Y- maze test and Morris water maze tests, and decreased phosphorylated tau levels in the rat cerebral cortex and hippocampus.

Animal Model:	Adult male C57BL/6 mice (8 week-old)
Dosage:	25 nmol/kg/day
Administration:	I.p.
Result:	Showed high levels expression of tyrosine Hydroxylase in the s. nigra and increased expression of neuroprotective growth factor Glial-Derived Neurotrophic Factor (GDNF).

Animal Model:	Adult male Sprague-Dawley (SD) rats (230-280 g)
Dosage:	50 nmol/kg
Administration:	I.p.
Result:	Improved Parkinson's disease symptom potentially and enhanced neurotransmission.

REFERENCES

[1]. Shi L, et al. A novel dual GLP-1/GIP receptor agonist alleviates cognitive decline by re-sensitizing insulin signaling in the Alzheimer icv. STZ rat model. Behav Brain Res. 2017;327:65-74.

[2]. Feng P, et al. Two novel dual GLP-1/GIP receptor agonists are neuroprotective in the MPTP mouse model of Parkinson's disease. Neuropharmacology. 2018;133:385-394.

[3]. Li T, et al. Neuroprotection of GLP-1/GIP receptor agonist via inhibition of mitochondrial stress by AKT/JNK pathway in a Parkinson's disease model. Life Sci. 2020;256:117824.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA