ZP 120C

Cat. No.:	HY-106234
CAS No.:	383123-18-0
Molecular Formula:	$C_{85}HN_{27}O_{15}$
Molecular Weight:	1781.2
Sequence Shortening:	Ac-RYYRWKKKKKKK-NH2
Target:	Opioid Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	ZP 120C is a potent and partial ORL1 receptor agonist. ZP 120C inhibits electrically induced contraction. ZP 120C can be used in the research of hyponatremia/hypokalemia[1][3].
IC_{50} & Target	NOP Receptor/ORL1
In Vitro	ZP 120C (1 nM) inhibits electrically induced contraction of the mouse vas deferen[2]. ZP 120C (1 μM) inhibits electrical field stimulation (EFS)-induced contractions in rat arteries[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	ZP 120C (1 nM/kg/min, i.v., 2.5 h) displays an aquaretic effect in conscious, chronically instrumented rats with congestive heart failure (CHF)[1] .ZP 120C (1 nM, i.c.v., 30 min) produces pronociceptive effects in the tail withdrawal assay and decreases locomotor activity in mice[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Rats induced by left coronary artery ligation (LCAL)[1]
Dosage:	1 nM/kg/min
Administration:	Intravenous injection (i.v.), 2.5 h of constant intravenous infusion
Result:	Increased diuresis, free water clearance, fractional water excretion, and fractional distal water excretion.

REFERENCES

[1]. Hadrup N, et al. Opioid receptor-like 1 stimulation in the collecting duct induces aquaresis through vasopressin-independent aquaporin-2 downregulation. Am J Physiol Renal Physiol. 2004 Jul;287(1):F160-8.

[2]. Rizzi A, et al. Pharmacological characterization of the novel nociceptin/orphanin FQ receptor ligand, ZP120: in vitro and in vivo studies in mice. Br J Pharmacol. 2002

Oct;137(3):369-74.

[3]. Simonsen U, et al. ZP120 causes relaxation by pre-junctional inhibition of noradrenergic neurotransmission in rat mesenteric resistance arteries. Br J Pharmacol. 2008 Mar;153(6):1185-94.

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