

[Lys5,MeLeu9,Nle10]Neurokinin A(4-10)

Cat. No.:	HY-P3849
CAS No.:	149270-28-0
Molecular Formula:	C ₃₉ H ₆₄ N ₈ O ₁₀
Molecular Weight:	804.97
Sequence Shortening:	DKFVGL(N-Me)-Nle-NH ₂
Target:	Neurokinin Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	[Lys5,MeLeu9,Nle10]Neurokinin A(4-10) (LMN-NKA), an analogue of Neurokinin A, is a selective and potent NK2R agonist. [Lys5,MeLeu9,Nle10]Neurokinin A(4-10) has prokinetic activity. [Lys5,MeLeu9,Nle10]Neurokinin A(4-10) can be used to study the roles of the NK-2 receptor in smooth muscle contraction in numerous tissues ^{[1][2][3]} .																
IC₅₀ & Target	NK2																
In Vivo	<p>[Lys5,MeLeu9,Nle10]Neurokinin A(4-10) (30-100 µg/kg, s.c.) increases peak bladder and colorectal pressures in minipigs^[1]. [Lys5,MeLeu9,Nle10]Neurokinin A(4-10) (0.3 µg/kg i.v. or 100 µg/kg i.n.) also increases bladder and colorectal pressures^[1]. [Lys5,MeLeu9,Nle10]Neurokinin A(4-10) (10-100 µg/kg, i.v., four times daily for six consecutive days) elicits micturition and defecation, emesis and hypotension in conscious dogs^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Anesthetized minipigs^[1]</td> </tr> <tr> <td>Dosage:</td> <td>30-100 µg/kg</td> </tr> <tr> <td>Administration:</td> <td>Subcutaneous injection (s.c.)</td> </tr> <tr> <td>Result:</td> <td>Showed significant, non-linear, dose-dependent increase in peak bladder and colorectal pressures, and was blocked by GR 159897 (HY-107691)(1 mg/kg i.v., 15 min prior to LMN-NKA).</td> </tr> <tr> <td>Animal Model:</td> <td>Conscious dogs^[2]</td> </tr> <tr> <td>Dosage:</td> <td>10-100 µg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intravenous injection (i.v.), four times daily for six consecutive days.</td> </tr> <tr> <td>Result:</td> <td>Elicited NK2 receptor-mediated micturition defecation and NK1 receptor-mediated emesis and hypotension.</td> </tr> </table>	Animal Model:	Anesthetized minipigs ^[1]	Dosage:	30-100 µg/kg	Administration:	Subcutaneous injection (s.c.)	Result:	Showed significant, non-linear, dose-dependent increase in peak bladder and colorectal pressures, and was blocked by GR 159897 (HY-107691)(1 mg/kg i.v., 15 min prior to LMN-NKA).	Animal Model:	Conscious dogs ^[2]	Dosage:	10-100 µg/kg	Administration:	Intravenous injection (i.v.), four times daily for six consecutive days.	Result:	Elicited NK2 receptor-mediated micturition defecation and NK1 receptor-mediated emesis and hypotension.
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REFERENCES

- [1]. Rupniak NMJ, et al. Prokinetic effects of the neurokinin NK2 receptor agonist [Lys5,MeLeu9,Nle10]-NKA(4-10) on bladder and colorectal activity in minipigs. *Neuropeptides*. 2019 Oct;77:101956.
- [2]. Rupniak NMJ, et al. [Lys5,MeLeu9,Nle10]-NKA(4-10) Elicits NK2 Receptor-Mediated Micturition and Defecation, and NK1 Receptor-Mediated Emesis and Hypotension, in Conscious Dogs. *J Pharmacol Exp Ther*. 2018 Jul;366(1):136-144.
- [3]. Sara Good, et al. [Lys5, MeLeu9, Nle10]NKA-4-10. Reference Module in Biomedical Sciences. 2019.
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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