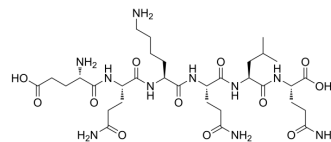


Nocistatin

Cat. No.:	HY-P3839
CAS No.:	207392-60-7
Molecular Formula:	C ₃₂ H ₅₆ N ₁₀ O ₁₂
Molecular Weight:	772.85
Sequence Shortening:	EQKQLQ
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	Nocistatin, a neuropeptide, is an endogenous ligand for the orphan opioid receptor-like receptor. Nocistatin is also a functional antagonist of neuropeptide nociceptin or orphanin FQ (Noc/OFQ). Nocistatin inhibits 5-HT release via a G _{i/o} protein-mediated pathway. Nocistatin blocks Nociceptin (Nociceptin)-induced allodynia and hyperalgesia ^{[1][2]} .
In Vitro	In the isolated organ bath studies Nocistatin (1 pM-1 μM) inhibits the prostaglandin- and the KCl-evoked contractions in the uterus dose-dependently. Nocistatin, generated locally in the uterus, exerts an inhibitory effect, the mechanism being mediated in part by Ca ²⁺ -dependent K ⁺ channels, the elevation of cAMP levels and sensory neuropeptides ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Intrathecal administration of Nocistatin (10 pg-1 μg) nociceptin or orphanin FQ (Noc/OFQ) induces pain responses including allodynia and hyperalgesia. Simultaneous administration of Nocistatin blocks the allodynia and hyperalgesia induced by Noc/OFQ ^[2] . Nocistatin also attenuates the allodynia and hyperalgesia evoked by prostaglandin E ₂ and the inflammatory hyperalgesia induced by formalin or carrageenan/kaolin, and reversed the Noc/OFQ-induced inhibition of morphine analgesia at picogram doses ^[2] . Nocistatin counteracted the impairment of learning and memory induced by Noc/OFQ or scopolamine. Nocistatin is widely present in the spinal cord and brain. Although Nocistatin does not bind to the Noc/OFQ receptor, it binds to the membrane of mouse brain and spinal cord with a high affinity ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Beáta H Deák, et al. Nocistatin inhibits pregnant rat uterine contractions in vitro: roles of calcitonin gene-related peptide and calcium-dependent potassium channel. *Eur J Pharmacol.* 2013 Aug 15;714(1-3):96-104.

[2]. E Okuda-Ashitaka, et al. Nocistatin: a novel neuropeptide encoded by the gene for the nociceptin/orphanin FQ precursor. *Peptides.* 2000 Jul;21(7):1101-9.

Caution: Product has not been fully validated for medical applications. For research use only.

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