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DATASHEET

Nociceptin

Product overview

Name	Nociceptin
Cat No	HB2424
Biological description	Nociceptin is a 17-amino acid neuropeptide which is the endogenous ligand for the nociceptin (NOP) receptor (previously known as ORL1). Nociceptin shows no activity at the classical μ , δ or κ opioid receptors. The neuropeptide is active in vivo and is involved in a variety of physiological processes. For example, it has been shown to be involved in pain, anxiety, depression, obesity, addiction, hyperphagia, Parkinson's, cognition, cardiovascular, inflammatory and learning and memory.
Alternative names	N/OFQ, Orphanin FQ,
Biological action	Activator
Purity	>95%
Description	Endogenous NOP agonist. Involved in a variety of physiological processes.

Images



Solubility & Handling

Storage instructions	-20 °C (desiccate)
Solubility overview	Soluble in water (1 mg/ml)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	FGGFTGARKSARKLANQ
Molecular Weight	1809.07
Chemical structure	
Molecular Formula	C ₇₉ H ₁₂₉ N ₂₇ O ₂₂
Sequence (one letter)	FGGFTGARKSARKLANQ
Sequence (three letter)	Phe-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-Leu-Ala-Asn-Gln
CAS Number	170713-75-4
PubChem identifier	16131448

Chemical name	FGGFTGARKSARKLANQ
SMILES	<chem>C[C@H]([C@@H](C(=O)NCC(=O)N[C@@H](C)C(=O)N[C@@H](CCCNC(=N)N)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H](CO)C(=O)N[C@@H](C)C(=O)N[C@@H](CCCNC(=N)N)C(=O)N[C@@H](CCCCN)C(=O)N[C@@H](CC(C)C)C(=O)N[C@@H](C)C(=O)N[C@@H](CC(=O)N)C(=O)N[C@@H](CCC(=O)N)C(=O)O)NC(=O)[C@H](CC1=CC=CC=C1)NC(=O)CNC(=O)CNC(=O)[C@H](CC2=CC=CC=C2)N)O</chem>
InChiKey	PULGYDLMFSFVBL-SMFNREODSA-N
Protein length	17

References

Structure- and conformation-activity studies of nociceptin/orphanin FQ receptor dimeric ligands.

Pacifico et al (2017) Sci Rep. 6

PubMedID [28383520](#)

Evidence for nociceptin/orphanin FQ (NOP) but not μ (MOP), δ (DOP) or κ (KOP) opioid receptor mRNA in whole human blood.

ASI-Hashimi et al (2016) Br J Anaesth 116(3)

PubMedID [26865135](#)

The neuropeptide nociceptin is a synaptically released endogenous inhibitor of hippocampal long-term potentiation.

Bongsebandhu-phubhakdi et al (2007) J Neurosci 27(18)

PubMedID [17475793](#)

The biology of Nociceptin/Orphanin FQ (N/OFQ) related to obesity, stress, anxiety, mood, and drug dependence.

Witkin et al (2014) Pharmacol Ther 141(3)

PubMedID [24189487](#)
