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PRODUCT INFORMATION



Neuropeptide EI (rat) (trifluoroacetate salt)

Item No. 41457

Formal Name:	L- α -glutamyl-L-isoleucylglycyl-L- α -aspartyl-L- α -glutamyl-L- α -glutamyl-L-asparaginyl-L-seryl-L-alanyl-L-lysyl-L-phenylalanyl-L-prolyl-L-isoleucinamide, trifluoroacetate salt		
Synonyms:	NEI, Neuropeptide-Glutamic Acid-Isoleucine	H—Glu—Ile—Gly—Asp—Glu—Glu—Asn—Ser—Ala—Lys—Phe—Pro—Ile—NH ₂ • XCF ₃ COOH	
Peptide Sequence:	EIGDEENSAKFPI-NH ₂		
MF:	C ₆₃ H ₉₈ N ₁₆ O ₂₃ • XCF ₃ COOH		
FW:	1447.6		
Purity:	≥95%		
Supplied as:	A solid		
Storage:	-20°C		
Stability:	≥4 years		

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Neuropeptide EI (NEI) (rat) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the NEI in the solvent of choice, which should be purged with an inert gas. NEI is sparingly soluble (1-10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of NEI can be prepared by directly dissolving the solid in aqueous buffers. NEI is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

NEI is an endogenous peptide fragment of rat prepro-melanin concentrating hormone (MCH) that is involved in hormone release, grooming behavior, and motor activity.¹ NEI corresponds to amino acids 140-152 of rat prepro-MCH and 131-143 of human, mouse, and rat prepro-MCH. It is expressed in both the central and peripheral nervous systems, localizes to the cytoplasm, and colocalizes with MCH in the CNS.^{1,2} NEI (1 μ M) reduces thyrotropin-releasing hormone (TRH) release in mediobasal hypothalamus explants.³ Intracerebroventricular administration of NEI increases serum levels of luteinizing hormone (LH) in male rats and in chronically ovariectomized female rats that received estradiol benzoate and progesterone in addition to NEI.⁴ NEI (1 μ g/animal, i.c.v.) induces excessive grooming behavior and increases locomotor activity in rats, effects that can be blocked by MCH (Item No. 24462) or α -melanocyte-stimulating hormone (α -MSH; Item No. 29923).⁵ It also increases the amount of time spent in REM sleep in rats when injected intracerebroventricularly or into the ventrolateral periaqueductal grey (vIPAG).

References

1. Bittencourt, J. and Celis, M.E. *Peptides* **29**(8), 1441-1450 (2008).
2. Bittencourt, J.C. *Gen. Comp. Endocrinol.* **172**(2), 185-197 (2011).
3. Kennedy, A.R., Todd, J.F., Stanley, S.A., et al. *Endocrinology* **42**(7), 3265-3268 (2001).
4. Attademo, A.M., Sánchez-Borzzone, M., Lasaga, M., et al. *Comparative Study* **25**(11), 1995-1999 (2004).
5. Sanchez, M., Baker, B.I., and Celis, M. *Peptides* **18**(3), 393-396 (1997).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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