



GENORACLE

Dihexa

Purity: >98% (HPLC on request) | Molecular Formula: C₂₇H₄₄N₄O₅
Molecular Weight: 504.672 g/mol | Sequence: Non-peptide

DESCRIPTION:

Dihexa is a peptide variant derived from angiotensin IV which has been found to potently improve cognitive function in animal models of disease such as Alzheimer's. Angiotensin IV is a derivative of the potent vasoconstrictor angiotensin II and has been shown to enhance acquisition, consolidation, and recall of learning

and memory in animal models when administered centrally or peripherally. In an assay of neurotrophic activity, Dihexa was found to be seven orders of magnitude more potent than BDNF. It could possibly help in the repair of the brain and nerves in neurological disease.

PROTOCOL:

Content & Potency: 10mg capsule provided in a quantity of 30 capsules

Suggested dosage: Take one capsule once daily for 30 days

CLINICAL RESEARCH:

The Procognitive and Synaptogenic Effects of Angiotensin IV- Derived Peptides Are Dependent on Activation of the Hepatocyte Growth Factor/ c-Met System

A subset of angiotensin IV (AngIV)-related molecules are known to possess procognitive/antidementia properties and have been considered as templates for potential therapeutics. However, this potential has not been realized because of two factors: 1) a lack of blood- brain barrier- penetrant analogs, and 2) the absence of a validated mechanism of action. The pharmacokinetic barrier has recently been overcome with the synthesis of the orally active, blood-brain barrier-permeable analog

N-hexanoic-tyrosine-isoleucine-(6) aminohexanoic amide (dihexa). Therefore, the goal of this study was to elucidate the mechanism that underlies dihexa's procognitive activity. Here, we demonstrate that dihexa binds with high affinity

to hepatocyte growth factor (HGF) and both dihexa and its parent compound Norleucine 1-AngIV (Nlel-AngIV) induce c-Met phosphorylation in the presence of subthreshold concentrations of HGF and augment HGF- dependent cell scattering. Further, dihexa and Nlel-AngIV induce hippocampal spinogenesis and synaptogenesis similar to HGF itself. These actions were inhibited by an HGF antagonist and a short hairpin RNA directed at c-Met. Most importantly, the procognitive/antidementia capacity of orally delivered dihexa was blocked by an HGF antagonist delivered intracerebroventricularly as measured using the Morris water maze task of spatial learning.

Benoist, Caroline C et al. "The procognitive and synaptogenic effects of angiotensin IV-derived peptides are dependent on activation of the hepatocyte growth factor/c-met system." The Journal of pharmacology and experimental therapeutics vol. 351,2 (2014): 390-402.

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