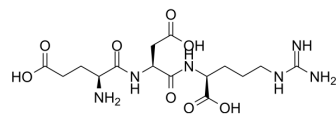


Pinealon

Cat. No.:	HY-P4052
CAS No.:	175175-23-2
Molecular Formula:	C ₁₅ H ₂₆ N ₆ O ₈
Molecular Weight:	418.4
Sequence Shortening:	EDR
Target:	ROS Kinase
Pathway:	Protein Tyrosine Kinase/RTK
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Pinealon is a 3-amino acid peptide and shows neuroprotective properties. Pinealon prevents reactive oxygen species (ROS) accumulation and suppresses the activation of ERK 1/2. Pinealon stimulates the functional activity of the main cellular elements of brain tissue, reduces the level of spontaneous cell death. Pinealon protects the rat offspring from prenatal hyperhomocysteinemia ^{[1][2][3]} .																
In Vitro	<p>Pinealon (10, 50, 100 nM; 30 min) in a dose-dependent manner prevents an increase in the ROS accumulation induced by ouabain in cerebellar granule cells^[1].</p> <p>Pinealon (10 nM; 0, 2.5, 5, 10, 20, 30 min) suppresses the activation of ERK 1/2 in rat cerebellar granule cells exposed to 500 mM homo-cysteine (HC)^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>																
In Vivo	<p>Pinealon (50, 100, 200 ng/kg; Injection, for 5 days) shows a dose-dependent effect on the maintenance of a previously acquired skill in rats^[2].</p> <p>Pinealon (10 µg/kg; daily for 5 days) protects the rat offspring from prenatal hyperhomocysteinemia^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>200-250 g, white male rats^[2]</td> </tr> <tr> <td>Dosage:</td> <td>50, 100, 200 ng/kg</td> </tr> <tr> <td>Administration:</td> <td>Injection; for 5 days</td> </tr> <tr> <td>Result:</td> <td>Showed dose-dependent effects on the maintenance of a previously acquired skill in the Morris maze.</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>180-200 g, Female Wistar rats^[3]</td> </tr> <tr> <td>Dosage:</td> <td>10 µg/kg</td> </tr> <tr> <td>Administration:</td> <td>I.p.; daily for 5 days</td> </tr> <tr> <td>Result:</td> <td>Protected the rat offspring from prenatal hyperhomocysteinemia.</td> </tr> </table>	Animal Model:	200-250 g, white male rats ^[2]	Dosage:	50, 100, 200 ng/kg	Administration:	Injection; for 5 days	Result:	Showed dose-dependent effects on the maintenance of a previously acquired skill in the Morris maze.	Animal Model:	180-200 g, Female Wistar rats ^[3]	Dosage:	10 µg/kg	Administration:	I.p.; daily for 5 days	Result:	Protected the rat offspring from prenatal hyperhomocysteinemia.
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REFERENCES

- [1]. Khavinson V, et al. Pinealon increases cell viability by suppression of free radical levels and activating proliferative processes. Rejuvenation Res. 2011 Oct;14(5):535-41.
- [2]. G. V. Karantysh, et al. Effect of Pinealon on Learning and Expression of NMDA Receptor Subunit Genes in the Hippocampus of Rats with Experimental Diabetes. Neurochemical Journal, 2020, 14, 314-320.
- [3]. Arutjunyan A, et al. Pinealon protects the rat offspring from prenatal hyperhomocysteinemia. Int J Clin Exp Med. 2012;5(2):179-85.
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Caution: Product has not been fully validated for medical applications. For research use only.

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