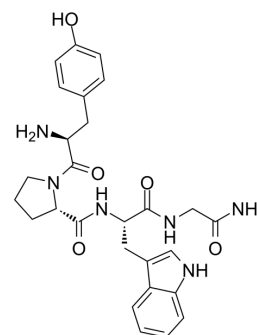


Tyr-W-MIF-1

| | |
|-----------------------------|---|
| Cat. No.: | HY-P3087 |
| CAS No.: | 144450-13-5 |
| Molecular Formula: | C ₂₇ H ₃₂ N ₆ O ₅ |
| Molecular Weight: | 520.58 |
| Sequence Shortening: | YPWG-NH ₂ |
| 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 | Tyr-W-MIF-1 is an opioid tetrapeptide with opiate and antiopiate activity. Tyr-W-MIF-1 can induce analgesia ^{[1][2][5]} . | | | | | | | | |
| In Vitro | <p>Tyr-W-MIF-1 (1-10 μM) inhibits the spontaneous firing on LC neurons^[1].</p> <p>Tyr-W-MIF-1 attenuates Morphine (3 μM)-induced down-regulation of both mu and delta receptors in SH-SY5Y human neuroblastoma cells^[4].</p> <p>Tyr-W-MIF-1 (0.3 μM) inhibits the binding of ³H-DAMGO (selective for mu opiate receptors) to rat brain^[5].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> | | | | | | | | |
| In Vivo | <p>Tyr-W-MIF-1 (i.c.v, 200 μg of 5 μL) induces prolonged analgesia in rats^[2].</p> <p>Tyr-W-MIF-1 (i.t., 0.75 μg) induces analgesia, and is reversed by Naloxone^[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>Rats^[2]</td> </tr> <tr> <td>Dosage:</td> <td>200 μg in 5 μL</td> </tr> <tr> <td>Administration:</td> <td>Intracerebroventricular injection (i.c.v)</td> </tr> <tr> <td>Result:</td> <td>Prolonged analgesia, measured by latency to remove the tail from a heating element.</td> </tr> </table> | Animal Model: | Rats ^[2] | Dosage: | 200 μg in 5 μL | Administration: | Intracerebroventricular injection (i.c.v) | Result: | Prolonged analgesia, measured by latency to remove the tail from a heating element. |
| Animal Model: | Rats ^[2] | | | | | | | | |
| Dosage: | 200 μg in 5 μL | | | | | | | | |
| Administration: | Intracerebroventricular injection (i.c.v) | | | | | | | | |
| Result: | Prolonged analgesia, measured by latency to remove the tail from a heating element. | | | | | | | | |

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[5]. Erchenyi J, et al. Isolation of a novel tetrapeptide with opiate and antiopiate activity from human brain cortex: Tyr-Pro-Trp-Gly-NH₂ (Tyr-W-MIF-1). Peptides. 1992 Jul-Aug;13(4):623-31.

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

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