

TP4 (Nile tilapia piscidin)

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| Cat. No.: | HY-P5557 |
| CAS No.: | 1429184-62-2 |
| Molecular Formula: | C ₁₃₅ H ₂₂₆ N ₅₀ O ₂₇ |
| Molecular Weight: | 2981.56 |
| Sequence: | Phe-Ile-His-His-Ile-Ile-Gly-Gly-Leu-Phe-Ser-Ala-Gly-Lys-Ala-Ile-His-Arg-Leu-Ile-Arg-Arg-Arg-Arg |
| Sequence Shortening: | FIHHIIGGLFSAGKAIHRLIRRRRR |
| Target: | Bacterial; Necroptosis |
| Pathway: | Anti-infection; Apoptosis |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. |

BIOLOGICAL ACTIVITY

Description

TP4 (Nile tilapia piscidin) is an orally active piscidin-like antimicrobial peptide. TP4 inhibits multiple gram positive and negative strains (MIC: 0.03-10 µg/mL). TP4 shows hemolytic activities. TP4 enhances immune response, antioxidant activity, and intestinal health against bacterial infections. TP4 also has anti-tumor effect, and induces necrosis by triggering mitochondrial dysfunction in cancer cells^{[1][2][3]}.

REFERENCES

- [1]. Peng KC, et al. Five different piscidins from Nile tilapia, *Oreochromis niloticus*: analysis of their expressions and biological functions. *PLoS One*. 2012;7(11):e50263.
- [2]. Eman Zahran, et al. Tilapia piscidin 4 (TP4) enhances immune response, antioxidant activity, intestinal health and protection against *Streptococcus iniae* infection in Nile tilapia. *Aquaculture*. Volume 513, 15 November 2019, 734451.
- [3]. Su BC, et al. Antimicrobial Peptide TP4 Induces ROS-Mediated Necrosis by Triggering Mitochondrial Dysfunction in Wild-Type and Mutant p53 Glioblastoma Cells. *Cancers (Basel)*. 2019 Feb 1;11(2):171.

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

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