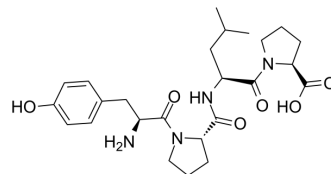


YPLP

Cat. No.:	HY-163315
CAS No.:	2414391-44-7
Molecular Formula:	C ₂₅ H ₃₆ N ₄ O ₆
Molecular Weight:	488.58
Sequence:	Tyr-Pro-Leu-Pro
Sequence Shortening:	YPLP
Target:	Keap1-Nrf2; AMPK
Pathway:	NF-κB; Epigenetics; PI3K/Akt/mTOR
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	YPLP is a yeast-derived peptide Tyr-Pro-Leu-Pro, which exhibits activity in anti fatigue mechanisms through the nuclear factor erythroid-2-related factor 2 (Nrf2)- and AMP-activated protein kinase (AMPK) pathway. YPLP is orally active ^[1] .								
In Vivo	<p>YPLP (10-50 mg/kg, i.g. for 4 weeks) alleviates exhaustive exercise caused oxidative damage by decreasing lipid oxidation and increasing antioxidant enzyme activities in muscle tissues through Nrf2/Keap1 pathway^[1].</p> <p>YPLP (10-50 mg/kg, i.g. for 4 weeks) improves ATP levels and energy metabolism through phosphorylation of AMPK and promotion of AMPK proteins in fatigue ICR mice^[1].</p> <p>YPLP (10-50 mg/kg, i.g. for 4 weeks) regulates expressions of differential abundance proteins (DAPs), participates in the protein biosynthesis/degradation, muscle dynamics, and nuclear transport process to regulate muscle function in fatigue mice^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>ICR mice^[1]</td> </tr> <tr> <td>Dosage:</td> <td>10-50 mg/kg/d</td> </tr> <tr> <td>Administration:</td> <td>i.g. for 4 weeks</td> </tr> <tr> <td>Result:</td> <td>Increased levels of Nrf2, ATP, pAMPK and decreased levels of Keap1.</td> </tr> </table>	Animal Model:	ICR mice ^[1]	Dosage:	10-50 mg/kg/d	Administration:	i.g. for 4 weeks	Result:	Increased levels of Nrf2, ATP, pAMPK and decreased levels of Keap1.
Animal Model:	ICR mice ^[1]								
Dosage:	10-50 mg/kg/d								
Administration:	i.g. for 4 weeks								
Result:	Increased levels of Nrf2, ATP, pAMPK and decreased levels of Keap1.								

REFERENCES

[1]. Cai J, et al., Studying Antifatigue Mechanism of Tyr-Pro-Leu-Pro in Exercise Mice Using Label-Free Proteomics. J Agric Food Chem. 2024 Jan 31;72(4):2178-2192.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA