

# Isolation and Identification of Peptidic $\alpha$ -Glucosidase Inhibitors Derived from Sardine Muscle Hydrolyzate

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We report here the isolation of  $\alpha$ -glucosidase (AGH) inhibitory peptides derived from sardine muscle hydrolyzate, which was prepared by digestion with *Bacillus licheniformis* alkaline protease. As a result of reversed-phase HPLC purification, two AGH inhibitory peptides were isolated from a DEAE-Sephadex A-25 column eluate. The peptides were identified as follows: Val-Trp ( $IC_{50} = 22.6$  mM) and Try-Tyr-Pro-Leu ( $IC_{50} = 3.7$  mM). AGH inhibitory studies of Try-Tyr-Pro-Leu and its derivatives demonstrated the importance of the tri-peptide chain length as well as the hydrophobic aromatic amino acid tyrosine at the N-terminus, aliphatic amino acids at the C-terminus, as well as an amide proton from the peptide chain at the middle position of the tri-peptide to develop AGH inhibition activity.

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