Bioactive Peptides from Ovotransferrin

Published date: March 2, 2010

Technology description

Description

University of Alberta researchers have developed a novel method of producing bioactive peptides from ovotransferrin, as well as predicting and identifying new, potent antihypertensive peptides. They have also discovered that enzymatic hydrolysis of ovotransferrin can increase antioxidant activity 5-fold, compared to un-hydrolyzed ovotransferrin.

Limitations

DISCLAIMER: Although care has been taken in the preparation of this material to be as accurate as possible, the contents of this document are provided for information purposes only, and neither the University of Alberta nor the inventors offer any warranty, written or implied, as to the accuracy of the said contents.

Background

Ovotransferrin, a glycoprotein found in raw egg whites, comprises approximately 13% of total egg white proteins. Bioactive peptides are specific fragments of proteins latent in ovotransferrin, but can be released through in vitro or in vivo enzymatic hydrolysis. Bioactive peptides have an inhibitory effect on angiotensin converting enzymes (ACE); a blood pressure regulator. Hypertension can occur through the elevated activity of ACE, necessitating the use of ACE inhibitory drugs. However, current synthetic inhibitors include many negative side-effects. Therefore, the development of novel ACE inhibitory peptides from food proteins, such as ovotransferrin, is a highly desirable alternative in the prevention and management of hypertension. It is also significant to note that these peptides have been reported to have strong antioxidant activity, due primarily to its iron-binding ability.

Application area

This invention will be of interest to the functional food, nutraceutical and ingredient/supplement industries.

Advantages

• Potential for new, functional products that could prevent cardiovascular disease, diabetes, cancer, etc due to ACE inhibitory activity and increased presence of antioxidants in the ovotransferrin hydrolysate
• The hydrolysate could be applied directly to functional food products due to the small size of the peptides

Institution

University of Alberta

联系我们

叶先生

电 话：021-65679356
手 机：13414935137
邮 箱：yeyingsheng@zf-ym.com