

研究报告

南海底层鱼突额鹦嘴鱼 *Scarus ovifrons* Temminck et Schlegel | 1846 肠道产酶微生物研究

黄光祥 [1,2] 周志刚 [2] 何夙旭 [2] 邵娜 [2] 石鹏君 [2] 刘玉春 [2] 姚斌 [2]

[1] 华中农业大学水产学院, 武汉 430074 [2] 中国农业科学院饲料研究所, 北京 100081

摘要:

通过不同培养基对南海底层鱼突额鹦嘴鱼 *Scarus ovifrons* Temminck et Schlegel, 1846 肠道微生物进行分离与 16S、18SrDNA 鉴定, 并构建系统发育树, 然后结合选择性培养基进行产蛋白酶、甘露聚糖酶、木聚糖酶、纤维素酶、淀粉酶等微生物的筛选。结果表明, 从突额鹦嘴鱼肠道分离纯化出 23 株微生物, 其中 14 株产酶, 以产蛋白酶与淀粉酶为主, 部分产纤维素酶、甘露聚糖酶、木聚糖酶; 产酶微生物主要为 *Bacillus* sp.; 分离出 3 株菌 (H-16、J-13 与 Y-13G) 其 16S、18SrDNA 序列与模式种相似度低于 97%, 为潜在的新种。研究表明, 南海底层鱼突额鹦嘴鱼肠道含有大量产酶微生物。

关键词: 突额鹦嘴鱼 *Scarus ovifrons* Temminck et Schlegel 1846 肠道 产酶微生物

Studies on the Intestinal Enzyme-Producing Microflora in Typical Marine Finfish *Scarus ovifrons* Temminck et Schlegel, 1846 at Sublayer of the South China Sea

HUANG Guang-xiang, ZHOU Zhi-gang, HE Su-xu, SHAO Na, SHI Peng-jun, LIU Yu-ehun, YAO Bin

1. Huazhong Agricultural University, Wuhan 430074 | 2. Feed Research Institute, Chinese Academy of Agricultural Sciences, Beijing 100081, China

Abstract:

The intestinal microflora in *Scarus ovifrons* Temminck et Schlegel, 1846 at sublayer of the South China Sea were isolated and identified by 16S, 18S rDNA sequences as well as the neighbour-joining phylogenetic trees. And the enzyme-producing microflora such as protein enzyme, mannanase, xylanase, cellulose enzyme, and amylase were screened by selective culture medium. The results showed that 23 isolates of intestinal microflora were identified, in which 14 isolates were the enzyme-producing microflora and mainly excreted protein enzyme and partly excreted cellulose enzyme, mannanase and xylanase; the enzyme-producing microflora were mainly *Bacillus* sp.; the isolate of H-16, J-13 or Y-13G from the intestine of *Scarus ovifrons* Temminck et Schlegel, 1846 might represent new microflora due to the less than 97% similarity after the blast of its 16S or 18S rDNA sequence. The results indicated that rich enzyme-producing microflora existed in the intestine of the marine finfish *Scarus ovifrons* Temminck et Schlegel, 1846 at sublayer of the South China Sea.

Keywords: *Scarus ovifrons* Temminck et Schlegel, 1846 intestine enzyme-producing microflora

收稿日期 2007-08-29 修回日期 2007-09-12 网络版发布日期

DOI:

基金项目:

中央级科研院所社会公益研究专项 (2005DIB4J038) 资助.

通讯作者: 姚斌, 研究员, 博士, 博士生导师, 从事微生物工程研究. Tel: 010-68975126; E-mail: yaobin@mail.eaas.net.cn. 周志刚, 副研究员, 博士, 硕士生导师. 从事水产微生物学研究.

作者简介: 黄光祥 | 硕士研究生

作者Email:

参考文献:

本刊中的类似文章

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF (292KB)
- ▶ [HTML全文]
- ▶ 参考文献 [PDF]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- 突额鹦嘴鱼 *Scarus ovifrons*
- ▶ Temminck et Schlegel 1846 肠道 产酶微生物

本文作者相关文章

PubMed

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
反馈标题	<input type="text"/>	验证码	<input type="text" value="1221"/>