

研究简报

青海盐湖嗜盐微生物类群及F16菌株生长特性和抗菌、抗肿瘤活性

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摘要 从青海盐湖底泥中分离出45株嗜盐微生物. 其中, 丝状真菌F16的抗菌和抗肿瘤活性最强, 其发酵液的乙酸乙酯粗提物能抑制4种细菌的生长, 尤其对大肠杆菌的抑制作用最强, 具有较强的细胞毒活性, 当粗提物浓度为 $50 \mu\text{g} \cdot \text{ml}^{-1}$ 时对肝癌细胞BEL7402的抑制率可达76.91%. F16菌株的最适生长温度为 15°C ; 培养基盐度升高, 对F16的抑制性增强, 当盐度超过15%时, F16不生长; 在pH值为5~9范围内, F16生长良好.

关键词 [嗜盐微生物](#) [抗菌](#) [抗肿瘤](#) [盐湖](#)

分类号

Halophilous microbial groups in saline lake of Qinghai and the growth characteristics and anti-microbial and anti-tumor activities of F16.

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Abstract

A total of forty-five halophilous microorganisms were isolated from the sediment of saline lake in Qinghai Province, among which, filamentous fungus F16 showed the highest activity of anti-microorganism and anti-tumor. The ethyl acetate extract of F16 culture filtrate showed a strong cytotoxicity, and could inhibit the growth of four kinds of bacteria, especially *Escherichia coli*. When the concentration of the crude extract was $50 \mu\text{g} \cdot \text{ml}^{-1}$, the inhibition rate to liver cancer cell BEL7402 reached 76.91%. The optimal temperature for F16 growth was 15°C , and the increase of salt concentration in media would inhibit its growth. When the concentration of salt surpassed 15%, F16 could not survive. F16 grew well when the pH value ranged from 5 to 9.

Key words [Halophilous microorganism](#) [Anti-microorganism](#) [Anti-tumor](#) [Saline lake](#)

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