

论著

抗巨噬细胞表面分子Mac-1单克隆抗体对利什曼原虫入侵的抑制作用

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收稿日期 修回日期 网络版发布日期 接受日期

摘要

目的: 了解抗巨噬细胞表面分子Mac-1 单克隆抗体(M_{1/70}和M_{18/2})对杜氏利什曼原虫入侵巨噬细胞的抑制作用。方法: 应用M_{1/70}和M_{18/2}处理巨噬细胞, 观察处理后巨噬细胞对杜氏利什曼原虫前鞭毛体的易感性。结果: 巨噬细胞经上述单抗处理后, 其原虫感染率和受染巨噬细胞内入侵的原虫数量明显降低, 原虫对巨噬细胞的入侵过程及速度也减慢。M_{1/70}和M_{18/2}两种单抗同时应用, 则对原虫侵入巨噬细胞的抑制作用更为显著, 巨噬细胞受染率只有13.8%, 且受染巨噬细胞内入侵的原虫数量仅有1-2个。结论: M_{1/70}和M_{18/2}可以通过与巨噬细胞表面Mac-1的结合, 分别干扰巨噬细胞表面分子上与利什曼原虫相结合的不同的连接位点, 抑制利什曼原虫对巨噬细胞的入侵。

关键词 [利什曼原虫](#) [巨噬细胞](#) [补体受体](#)

分类号

THE INHIBITORY EFFECT OF ANTI-MAC-1 MONOCLONAL ANTIBODIES ON THE INVASION OF *LEISHMANIA DONOVANI*

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Abstract

AIM: To study the effect of anti Mac-1 monoclonal antibodies (McAbs), M1/17 and M18/2, on the invasion of *Leishmania donovani* to macrophages. METHODS: The susceptibility of the macrophages treated with M1/70 and M18/2, toward *Leishmania donovani* promastigotes was investigated by determining the percentage of infected macrophages and the number of parasites in infected macrophages. RESULTS: The percentage of invasive macrophages and the number of invasive parasites were significantly decreased after the macrophages were treated with the McAbs. The invasion process of parasites into the macrophages was found decelerated as well. When macrophages were treated with both M1/70 and M18/2, the invasion of parasites into the macrophages was more distinctly inhibited than those treated with either of the two McAbs, the infection rate being 13.8% and only 1-2 parasites could be found in each infected macrophage. CONCLUSION: The inhibitory effect of McAbs M1/70 and M18/2 on the invasion of *Leishmania donovani* to macrophages was achieved by blocking separately the specific binding sites of the macrophage surface molecules, Mac-1 receptor.

Key words [Leishmania donovani](#) [macrophage](#) [complement receptor](#)

DOI:

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