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论著

重组丝虫壳质酶及SXP-1抗原用作抗微丝蚴疫苗的研究

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摘要

目的：测定重组马来丝虫壳质酶（ｒ－ｃｈｉｔｉｎａｓｅ）及其片段和ＳＸＰ－１抗原免疫接种沙鼠后是否具有抗马来丝虫微丝蚴（ｍｆ）血症的保护性免疫作用。方法：试验动物分别用壳质酶及其片段（Ｆ７Ｒ２，Ｆ８Ｒ２）和ＳＸＰ－１免疫。用酶联免疫吸附试验、ＳＤＳ－聚丙烯酰胺凝胶电泳及免疫印渍试验测定抗体水平及特异性抗体蛋白分子。用寄生虫学方法检测ｍｆ及成虫。结果：用重组马来丝虫壳质酶及其片段抗原免疫沙鼠，再以马来丝虫感染期幼虫（Ｌ３）攻击，可诱导其免疫系统产生抗ｍｆ的部分保护性免疫，但对成虫无作用。Ｌ３攻击后的沙鼠处于ｍｆ显性前期或显性期时，用重组抗原免疫则抗ｍｆ血症的保护性作用差或无作用。用ＳＸＰ－１抗原免疫沙鼠也能降低ｍｆ血症水平，并可减少成虫负荷。结论：重组丝虫壳质酶及其片段和ＳＸＰ－１抗原具有抗马来丝虫ｍｆ血症的保护性免疫作用。

关键词 重组丝虫抗原,疫苗,保护性免疫

分类号

STUDIES ON RECOMBINANT CHITINASE AND SXP 1 ANTIGENS AS ANTIMICROFILARIAL VACCINES *

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Abstract

AIM: To determine whether immunization with recombinant filarial chitinase or a fragment containing the epitope recognized by McAbMF1 and SXP 1 could protect jirds against microfilaremia resulting from infection with B.malayi. METHODS: Test jirds were immunized with the following recombinant parasite antigens: filarial chitinase, the c terminal fragments F 7R 2 or F 8R 2 of r chitinase, filarial SXP 1, myosin or maltose binding protein (MBP). Employing immunochemical techniqe (SDS PAGE, Western Blotting) and serology (ELISA) measured antifilarial antibodies level. RESULTS: Immunization of jirds with recombinant chitinase induced partial protection against microfilaremia resulting from subsequent infection with B.malayi, but did not reduce adult worm burdens. Vaccination was much less effective when administered during the prepatent stage of infection and was ineffective when given to microfilaremic jirds.Immunization of jirds with SXP 1, an antigen present in multiple worm stages also reduced microfilaremia and, in some experiments, adult worm burdens. CONCLUSION: The recombinant chitinase, fragments F 7R 2 and F 8R 2 and SXP 1 could provide partial protection against microfilaremia in jirds.

Key words Recombinant filarial antigens vaccine protective immunity

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