

石斑魚虹彩及神經壞死病毒雙價不活化疫苗之研發

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摘要

本研究自田間選殖高毒力與抗原性之石斑魚虹彩病毒(Grouper iridovirus, GIV)及神經壞死病毒(Nervous necrosis virus, NNV)等疫苗株試製成浸泡型雙價不活化疫苗進行田間試驗。雙價浸泡型疫苗於龍膽石斑田間試驗場中，其免疫組的體長與體重於免疫後 30、45 及 60 天的增長情形皆優於對照組；另於效力試驗結果發現疫苗組於免疫後 14、45、60 天以 10^9 TCID₅₀/mL 神經壞死病毒進行肌肉攻毒的疫苗存活率皆優於對照組；在虹彩病毒效力試驗評估部分以 10^7 TCID₅₀/mL 進行腹腔攻毒，只於免疫後 60 天之存活率優於對照組。綜合上述結果顯示：浸泡型雙價疫苗使用於白身苗之龍膽石斑，具有 NNV 防疫效果並可維持至免疫後 60 天；相較於虹彩病毒之防疫效果只出現於免疫後 60 天，則需再進一步探討其可能造成的原因。

關鍵字：虹彩病毒、神經壞死病毒、浸泡型雙價疫苗

Development of bivalent vaccine of iridovirus and nervous necrosis virus in grouper

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We selected the field isolates with high virulence and antigenicity of grouper iridovirus (GIV) and nervous necrosis virus (NNV) as the seed virus for immersion vaccination used in field tests. The safety tests of the bivalent vaccine demonstrated that the vaccine groups were better than control group in weight gain of fish. The efficacy of the bivalent vaccine in NNV was evaluated by intramuscular injection with 10^9 TCID₅₀/mL NNV and the result revealed significant protections at 14, 45 and 60 days post-vaccination ($p < 0.05$), respectively. In addition, the efficacy of the bivalent vaccine was evaluated by intraperitoneal injection with 10^7 TCID₅₀/mL GIV virus and the result revealed the significant protection only at 60 days post-vaccination ($p < 0.05$). These results demonstrated the effective protections of immersion types bivalent vaccine against NNV in giant grouper (*Epinephelus lanceolatus*) lasted for 60 days post-vaccination and against GIV only started at 60 days post-vaccination. Future study may be undertaken in the future.

Keyword : iridovirus, nervous necrosis virus, immersion vaccine