Time course study of in situ expression of antigens following DNA-vaccination against VHS in rainbow trout (Oncorhynchus mykiss Walbaum) fry - DTU Orbit (01/01/2019)

Time course study of in situ expression of antigens following DNA-vaccination against VHS in rainbow trout (Oncorhynchus mykiss Walbaum) fry

The present study was performed as a time course study of fish vaccinated with 20 μg plasmid DNA vaccine encoding either the VHSV G-protein or the VHSV N-protein. Samples of the injection site were collected sequentially over a 7-week period. The study revealed an intense positive staining by immunohistochemistry for the viral G-protein mainly in the membrane of intact myocytes, most prominent by days 10-27, and with concomitant infiltration of inflammatory cells by days 13-38 that subsequently lead to a marked reduction in the number of myocytes expressing the G-protein. By immunofluorescence, infiltrating cells positive for MHC II, IgM, and C3 were demonstrated. By contrast, in fish vaccinated with the VHSV-N construct, fewer, diffusely positive myocytes were found, most prominent by days 13-38, these having a positive reaction for the N-protein mainly in the cytoplasm and variably in the membrane. N-protein positive myocytes did not attract infiltrating cells to the same degree. Positive reaction for the N-protein almost ceased by day 48 post-vaccination.

General information
State: Published
Organisations: Section of Fish Diseases, Division of Poultry, Fish and Fur Animals, National Veterinary Institute
Contributors: Lorenzen, E., Lorenzen, N., Einer-Jensen, K., Brudeseth, B., Evensen, O.
Pages: 27-41
Publication date: 2005
Peer-reviewed: Yes

Publication information
Journal: Fish & Shellfish Immunology
Volume: 19
Issue number: 1
ISSN (Print): 1050-4648
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 3.37 SJR 1.126 SNIP 1.103
Web of Science (2017): Impact factor 3.185
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.36 SJR 1.128 SNIP 1.142
Web of Science (2016): Impact factor 3.148
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3.19 SJR 1.265 SNIP 1.116
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 2.92 SJR 1.14 SNIP 1.098
Web of Science (2014): Impact factor 2.674
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 3.11 SJR 0.997 SNIP 1.138
Web of Science (2013): Impact factor 3.034
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 3.02 SJR 1.156 SNIP 1.169
Web of Science (2012): Impact factor 2.964
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1