

# Detection of Immunodominant Proteins of *Felis catus* Gammaherpesvirus 1

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## Abstract

We recently identified and sequenced a novel herpesvirus of domestic cats, *Felis catus* gammaherpesvirus 1 (FcaGHV1). FcaGHV1 is a member of the gammaherpesvirus subfamily which also includes the human cancer-associated herpesviruses, Epstein-Barr virus (EBV) and Kaposi' s sarcoma-associated herpesvirus (KSHV). As a first step toward developing a serologic assay to detect exposure to FcaGHV1, we are seeking to determine which viral proteins elicit an antibody response in naturally occurring domestic cat infections. We cloned selected FcaGHV1 genes into a mammalian expression vector and performed transfections of a feline cell line for expression of recombinant FcaGHV1 proteins. We fixed cells with paraformaldehyde and methanol-acetone and tested reactivity to serum from cats naturally infected with FcaGHV1 using immunofluorescent antibody staining. An FIV immunofluorescence test was developed as a positive control for transfection and assay function. Serum from specific pathogen-free laboratory cats served as negative controls. Preliminary data from 9 cats with FcaGHV1 infection indicates that capsid protein ORF 65 and tegument protein ORF38 may elicit antibodies during naturally occurring FcaGHV1 infection. Results of this study will suggest which FcaGHV1 proteins are immunodominant during natural infection.

## Keywords: