R7 – Rapid Immunochromatographic test for serological diagnosis of Feline Immunodeficiency Virus in cats.

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Introduction:

Feline immunodeficiency Virus (FIV) is one of the most important and common infectious diseases of cats. FIV is a retroviruses that belongs to the lentivírus subgroup and it is responsible for a severe acquired chronic immunodeficiency in cats leading to death of infected animals. The standard method for FIV diagnosis is based on isolation of infective virus from peripheral blood lymphocytes. Such assay is longstanding and expensive for routine laboratory practice. Previous studies showed that infected cats present high levels of anti-P24 protein. This protein can be used as a target for diagnosis of Feline immunodeficiency. In this work we described our preliminary results to achieve a dual path immunochromatography kit for FIV.

Objective:

Development of a rapid diagnostic test for feline immunodeficiency virus infection.

Methodology:

The recombinant protein p24 was over expressed in the selected recombinant bacterial clone induced with 1M IPTG (isoprophyl-D- thiogalactopyranoside). The purification based on the poly-histidine tail added to the recombinant protein was performed by immobilized metal affinity in nickel-charged resin (IMAC). The purified r-p24 was characterized by polyacrylamide gel electrophoresis (SDSPAGE), by Western Blot and ELISA. The r-p24 was immobilized on a nitrocellulose membrane (MDI, India) as test line zone. A protein A-gold conjugated was used as the conjugate pad. A FIV Sera panel from cats was used to test the immunochromatographic strips.

Results:

Recombinant protein p24 preparation isolated from the pool of affinity chromatographic fractions showed homogeneous by electrophoretic techniques. The previous results in Rapid Immunochromatographic testshowed reactivity with s positives and negatives sample for FIV. There were no false positive on the samples used.

Conclusion:

The results obtained so far suggest that the antigen r p24 along with the complex Feline anti-p24 -Protein A-gold can be used as a Rapid Immunochromatographic assay. Further analysis must be performed to assure sensibility and specificity of the proposed assay.

Keywords: FIV, Immunochromatographic test , P24