**FEL-O-VAX® MC-K**

*Fort Dodge*

Vaccine
Microsporum Canis Vaccine, Killed Fungus

**U.S. Vet. Lic. No.:** 112

**Composition:** FEL-O-VAX® MC-K is an inactivated whole dermatophyte *Microsporum canis* vaccine homogenized for uniformity and adjuvanted with MetaStim®. The dermatophyte is harvested and inactivated using a soft-kill process to preserve immunogenicity.

Formalin, thimerosal, neomycin, polymyxin B and amphotericin B added as preservatives.

**Indications:** For use in adult cats at least four months of age as an aid in the prevention and treatment of clinical signs of disease caused by *Microsporum canis*. Vaccination has not been demonstrated to eliminate *Microsporum canis* organisms from infected cats.

**Dosage and Administration:**
Prevention: Vaccinate cats subcutaneously with one 1 mL dose. Administer a second 1 mL dose 12-16 days after the first dose. A third 1 mL dose should be administered 26-30 days following the second dose. Field efficacy studies showed cats remained free of lesions for at least two weeks following the third dose. No further duration of immunity data has been established.

Treatment: Vaccinate cats subcutaneously with one 1 mL dose. Administer a second 1 mL dose 12-16 days after the first dose. A third 1 mL dose should be administered 26-30 days following the second dose, if typical lesions are still present. Field efficacy studies showed cats remained free of lesions for at least two weeks following the third dose. No further duration of immunity data has been established.

InfoVax-ID® System: The InfoVax-ID® System provides a simple and effective method of recording pertinent information on the vaccines administered to animals in a veterinary practice.

For vaccines requiring reconstitution, remove label from both vials and affix both labels to the animal's medical chart.
Using the InfoVax-ID® System:
1. Grasp the lower right hand corner of the tab at the arrow marked "Peel Here" between your thumb and forefinger.
2. Pull steadily at a slight upward angle until the top portion of the label is separated from the vial.
3. Place the label on the animal's medical chart. Press down on the label to ensure adhesion.

Precaution(s): Store in dark at 2° to 7°C (35° to 45°F). Avoid freezing.

Caution(s): In the absence of a veterinarian-client-patient relationship, Federal law prohibits the relabeling, repackaging, resale, or redistribution of the individual contents of this package. (9 CFR 112.6)

This product is intended only for vaccination of adult cats. Please handle carefully and avoid accidental self-inoculation. In case of anaphylactoid reaction, administer epinephrine.

Transient swelling or temporary alopecia may occur at the injection site. Not recommended for use in pregnant queens. Not recommended for use in immune suppressed cats. Vaccination has not been demonstrated to eliminate Microsporum canis organisms from infected cats.

Warning(s): For veterinary use only.

Discussion: Ringworm Control Program: The usage of FEL-O-VAX® MC-K is one part of a total ringworm control program. Ringworm can be a frustrating disease to control in cats due to the persistent nature of Microsporum canis spores and the presence of carrier cats. The following treatment program is recommended:
1. Obtain a definitive diagnosis via culture to identify the organism present. Microsporum canis is the most common of several types of fungus that can affect cats.¹ FEL-O-VAX® MC-K is effective against Microsporum canis.
2. Close the environment to new cats during the initial cleanup phase.
3. Treatment of the environment: It is extremely important to clean up the environment for long-term success. Although it is not possible to eliminate all of the fungal spores from the environment, it is possible to significantly reduce the level of Microsporum canis contamination by following these steps to minimize exposure.
   a) Clean all non-porous surfaces with an appropriate disinfectant such as Nolvasan® Solution.
   b) For those surfaces difficult to clean (i.e., wooden cages, rusted wire mesh, etc.), consideration should be given to repainting. Walls, ceilings and floors may also be considered for repainting.
   c) Discard items which cannot be properly disinfected (i.e., cat toys, carpet climbers, non-washable pet beds, etc.).
   d) Clean and replace furnace filters. Clean vents and ducts or consider installation of a separate ventilation system.
   e) Clean and disinfect carpets.
4. Adjunctive Therapy:
   a) Efforts should be made to reduce the number of infected particles carried by cats. Prior
to vaccination, cats should be bathed and clipped. This will help remove infective particles carried by the hair. Consider bathing the cats every other week following the first FEL-O-VAX® MC-K vaccination to reduce infectious materials above the skin surface. A commercial shampoo such as Nolvasan® Shampoo is recommended.
b) It is recommended that cats be vaccinated with FEL-O-VAX® MC-K in accordance with label directions.
c) Immunosuppressed cats are more susceptible to recurring fungal disease. Efforts should be made to protect cats from immunosuppression. Agents such as feline leukemia virus are known to cause immunosuppression. Programs should be implemented to control agents that cause immunosuppression such as feline leukemia virus. If you are not currently vaccinating against feline leukemia, we recommend use of a commercially available vaccine such as Fel-O-Vax Lv-K® or Fel-O-Vax Lv-K® IV. Cats should also be current on vaccinations for other known disease agents.
A small percentage of cats may not adequately respond to vaccination. Due to the nature of fungal disease, these cats should be easily recognizable and should be isolated from healthy cats to prevent continued contamination of the environment. It is important to use a multi-faceted approach to eradicating and preventing ringworm caused by Microsporum canis in cats.
The field trials in catteries were supervised by licensed veterinarians who observed the vaccinated cats for untoward reactions. A total of 692 cats received three doses of the vaccine. No untoward reactions were observed in 92.4 percent of the doses. The vaccine induced a small percentage of post-vaccinal reactions. These reactions included swelling or transient nodules, temporary alopecia and soreness at the injection site. Six (6) cats demonstrated additional minor reactions. All post-vaccinal reactions were transient in nature and required no additional care.

**Trial Data:** Efficacy: The immunogenicity of FEL-O-VAX® MC-K was critically evaluated in catteries in which the disease was endemic using cats of various ages. Each cat was vaccinated three times. Two doses were administered at a 14-day interval and a third dose was administered 28 days after the second dose. A control group was vaccinated with an adjuvanted placebo identical to FEL-O-VAX® MC-K except that it contained no Microsporum canis antigen.
A total of 159 cats received FEL-O-VAX® MC-K and 159 cats received the placebo. At the time of the first vaccination, all cats were examined for the presence of ringworm and thereafter were monitored biweekly for fluorescence and ringworm lesions until 14 days after the final vaccination. Cats were considered negative if they showed neither fluorescence nor lesions.
In the therapeutic study, 97.4 percent in the group to be vaccinated showed lesions before vaccination. At 14 days after the third vaccination, 79.1 percent of the vaccinated cats did not have lesions. During the same period, the ringworm positive control cats with lesions slightly decreased from 98.1 percent to 90.2 percent. Ninety-eight (98) percent of the vaccinated cats had some fluorescence prior to vaccination. At 14 days post third vaccination, 72.4 percent of the vaccinated cats did not have fluorescence. During the same period, the ringworm positive control cats with fluorescence decreased from 96.1
percent to 90.9 percent. Clinical scores of the ringworm positive vaccinated cats decreased from an average of 4.12 to 0.79 whereas among the ringworm positive controls, clinical scores rose from 3.85 to 3.96 on a scale of 0 to 10. The results indicate that FEL-O-VAX® MC-K is an effective treatment for clinical signs of feline ringworm caused by *Microsporum canis*.

Six (6) of the catteries contained ringworm negative cats in both the vaccine and control groups at the beginning of the study and a total of 41 such cats were included in the prophylaxis study. During the study, 21 of the 25 ringworm negative vaccinated cats (84 percent) remained free of lesions and/or fluorescence and the remaining 4 vaccinated cats had transient fluorescence or lesions which cleared by the end of the study. By contrast, 12 of 16 ringworm negative control cats (75 percent) developed either lesions and/or fluorescence during the study. The results indicate that FEL-O-VAX® MC-K is effective in preventing clinical signs of feline ringworm caused by *Microsporum canis*.

The environment in the catteries allowed for critical evaluation of the vaccine in that no improvements were made in sanitization or management practices. In addition, no antimycotic therapy was administered during the study. During the vaccination period, control cats mingled constantly with the vaccinates permitting easy transmission of the fungal infection.

**References:** Available upon request.

**Presentation:** 25 doses (25 x 1 mL vials of vaccine), featuring the InfoVax-ID® System. Patent Pending

U.S. Pat. No. 5,704,648 (InfoVax-ID® System)

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Disclaimer: Every effort has been made to ensure the accuracy of the information published. However, it remains the responsibility of the readers to familiarize themselves with the product information contained on the product label or package insert. Compendium Code No.: 10030841