PUREVAX RABIES BENEFITS:

> ADVANCED CANARYPOX TECHNOLOGY FOR A POWERFUL IMMUNE RESPONSE, WITHOUT THE NEED FOR ADJUVANT

> IMPROVED LOCAL TOLERANCE AT THE SITE OF INJECTION COMPARED TO INACTIVATED ADJUVANTED PRODUCTS

REFERENCES:
1. Local panels from key countries
5. MeriaL internal data. Feline Rabies vaccines: Evaluation of chronic infection site reactions in cats and rodents
9. The 2006 American Association of Feline Practitioners Feline Vaccine Advisory Panel Report. JAVMA. 2006, 229(9); 1405-1441
10. MeriaL internal data. pr&d06.0349.r
11. MeriaL internal data. pr&d06.0048.r

PUREVAX RABIES PRESCRIBING INFORMATION:
NAME OF THE VETERINARY MEDICINAL PRODUCT: PUREVAX Rabies suspension for injection
QUALITATIVE AND QUANTITATIVE COMPOSITION: Each dose of 1 ml contains: live recombinant canarypox virus (Gp2) ≥ 10^6.8 faid*50 (fluorescent assay infectious dose 50%)
PHARMACEUTICAL FORM: Suspension for injection
CLINICAL PARTICULARS: Target species: Cats. Indications for use: Active immunisation of cats 12 weeks of age and older to prevent mortality due to rabies infection. Onset of immunity: 4 weeks after the primary vaccination course. Duration of immunity after primary vaccination: 1 year. Duration of immunity after revaccination: 3 years. Special precautions for use: Only healthy animals should be vaccinated. Canarypox recombinants are known to be safe for humans. Mild local/ systemic adverse reactions related to the injection itself may be observed transiently. In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label to the physician. Adverse reactions: Transient and slightly apathetic may occur, as well as occasionally mild anorexia or hyperthermia (above 39.5 °c), lasting usually 1 or 2 days. Most of these reactions appeared during the 2 days following the vaccine injection. A transient local reaction may occasionally occur (pain at palpation, limited swelling that may become nodular, heat at the injection site, and in some cases erythema), that usually disappears within 1 or 2 weeks at most. Very rarely, a hypersensitivity reaction may occur, which may require appropriate symptomatic treatment. Use during pregnancy, lactation or lay: The safety of the veterinary medicinal product has not been established during pregnancy and lactation. Interaction with other medicinal products and other forms of interaction: Safety and efficacy data are available which demonstrate that this vaccine can be mixed and administered with MERIAL PUREVAX non-adjuvanted vaccines containing various combinations of feline viral rhinotracheitis, calicivirosis, panleukopenia and chlamydiosis components. Based on currently available efficacy data showing a risk of interference, the administration of MERIAL non-adjuvanted vaccine against feline leukaemia is not recommended within 14 days before or after vaccination with this vaccine. Amounts to be administered and administration route: Subcutaneous use. Two doses of 1 ml at intervals of 1 week according to the following vaccination schedule: Primary vaccination: 1 injection from 12 weeks of age. Re-vaccination: 1 year after primary vaccination, then at intervals of up to 3 years. Travel to countries requiring a rabies antibody titer test experience has shown that some vaccinated animals, while protected, may not show the 0.5 iu/ml antibody titre required by some countries. Veterinary surgeons may wish to consider two vaccinations. The best time for a blood sample to be taken is around 28 days after vaccination. IMMUNOLOGICAL PROPERTIES: Phamacotherapeutic group: other immunologicals for cats, ATC code: Qi06ax. The vaccine strain vcp65 is a recombinant canarypox virus expressing the polyprotein of the rabies virus. After inoculation, the virus expresses the protective protein, but does not replicates in the cat. As a consequence, the vaccine stimulates active immunity against rabies virus in cats. Further information is available on request from: Merial Veterinary Division PT Box 327, Sherbrooke Business Park, Hervey, CMR 3TE, Tel 0870 6000 123 UK Mail 2006. All rights reserved, Merial. U.S. Mail 703-772-8000

DISCOVER ALL THE BENEFITS OF PUREVAX RABIES, THE ONLY NON-ADJUVANTED FELINE RABIES VACCINE
Today, rabies has been eradicated from numerous European countries. However, it is still widespread in Eastern Europe, where over 1,000 cases are reported each year in dogs and cats. Sporadic cases of rabies are also diagnosed in Western Europe, usually in dogs that have been imported from countries where the disease is endemic.

**Even in disease-free countries, the risk of rabies persists in Europe.**

Recent cases of rabies have been recorded in dogs and cats in the North-East of Italy, a country that was declared disease-free in 1997, but where the disease was reintroduced towards the end of 2008 by infected foxes. In all likelihood, the latter travelled from Slovenia.

Similarly, in certain countries that are free from rabies in terrestrial carnivores (foxes, badgers, pine martens, etc.), cases of rabies are regularly diagnosed in bats infected with a specific lyssavirus (EBLV), which is potentially transmissible to domestic carnivores (1 cat was infected in France in 2007).

Rabies vaccination remains the best means of protection against the disease.

### Merial and Rabies Vaccines

**Merial has a long history of producing high quality rabies vaccines and is a direct descendant of Institut Merieux, the laboratory that first made inactivated cell cultured rabies vaccines available.**

- Merial is the global no.1 producer of rabies vaccines*1
- RABISIN® has been widely used to help control rabies disease outbreaks across the world, such as the recent outbreak in Bali*2
- RABORAL V-RC™, a vaccinia vectored oral bait vaccine has been used in Western Europe to help eradicate the disease from wildlife reservoirs such as the red fox

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*Not all products mentioned are licensed for use in the United Kingdom.*
ADVANCED TECHNOLOGY

PUREVAX RABIES:
> BASED ON INNOVATIVE CANARYPOX VECTOR TECHNOLOGY
> THE ONLY NON-ADJUVANTED RABIES VACCINE IN EUROPE
> DEVELOPED EXCLUSIVELY FOR CATS

CANARYPOX TECHNOLOGY
The PUREVAX range utilises Merial’s advanced vaccine technology platforms and PUREVAX Rabies is based on canarypox vector technology.

The use of this technology ensures a powerful immune response

> Following injection of the live canarypox vector virus, the relevant rabies virus antigens are synthesised and expressed by the cat’s cells, triggering a protective immune response.

> The inherent properties of the canarypox vector mean that reversion to virulence is impossible, giving the benefits of a live vaccine without this potential associated risk.

CANARYPOX TECHNOLOGY IN ACTION

BENEFITS OF PUREVAX TECHNOLOGY

THE TECHNOLOGY USED IN THE MANUFACTURE OF THE PUREVAX VACCINES MEAN THAT IT IS THE ONLY FULLY NON-ADJUVANTED FELINE VACCINE RANGE

> Unlike traditional inactivated rabies vaccines, PUREVAX Rabies does not rely on adjuvants to induce a strong immune response

> The excellent local tolerance of non-adjuvanted vectored vaccines has been demonstrated\(^{14,5}\) and non-adjuvanted vaccines have been shown to cause fewer local adverse reactions\(^{6,7}\)

EXPERT OPINION

Several experts and expert groups advise the use of less inflammatory or non-adjuvanted vaccines in cats

> WSAVA Vaccination Guidelines Group 2010\(^8\):
“Non-adjuvanted vaccines should be administered to cats wherever possible”

> American Association of Feline Practitioners\(^9\):
“A direct association between the presence or severity of postvaccinal inflammation and tumor risk has not specifically been established, but after taking all currently available evidence into consideration, the Advisory Panel suggests that veterinarians use less inflammatory products whenever possible”
PROVEN LOCAL TOLERANCE\textsuperscript{4,5}
The local safety of 3 licensed multivalent cat vaccines was studied by histology in a blinded multicentre trial\textsuperscript{3}. Each vaccine group contained 15 cats.

POWERFUL IMMUNE RESPONSE WITHOUT THE NEED FOR ADJUVANT\textsuperscript{10}
Given the recent changes to the Pet Travel Scheme (PETS), which mean that compulsory blood testing post vaccination is no longer required* (for animals travelling to EU or certain other countries), it’s more important than ever to be confident that your rabies vaccine induces a strong immune response.

Use with confidence

The use of non-adjuvanted PUREVAX vaccines results in a better local tolerance than adjuvanted vaccines.

Histological changes 7 days after vaccination

- **Non-adjuvanted PUREVAX RCPChFeLV**
  - Biopsy from the lumbar vaccine site. There is a discrete aggregate of macrophages, with a central perivascular lymphoid infiltration, immediately beneath the panniculus muscle. Bar = 200 µm.

- **Lipid-based adjuvanted vaccine**
  - Biopsy from the interscapular vaccine site. Extensive reaction extending from hypodermis to subcutis, with a broad zone of necrosis accompanied by dense aggregates of macrophages with discrete perivascular lymphoid infiltrates. Bar = 1000 µm.

- **Aluminium hydroxide-based adjuvanted vaccine**
  - Biopsy from the lumbar vaccine site. Intense granulomatous inflammatory response extending into deep muscle layer and distinct from this is an accompanying infiltrate of lymphocytes. Bar = 200 µm.

A different study\textsuperscript{4,5} confirmed the local tolerance and showed that an injection of PUREVAX Rabies did not induce any more inflammation than an injection of saline.

**Vaccination schedule:**
- For use in cats only
- Primary vaccination: Single injection from 12 weeks of age
- Booster vaccination: 1 year after primary vaccination, then at intervals of up to 3 years.
- Can be mixed and administered with other vaccines from PurevaX range (except FelV\textsuperscript{**}) - can be used as a diluent for PUREVAX RC, RCP and RCPCh.

**Can be used to boost other vaccines\textsuperscript{11}**

Booster injection with PUREVAX Rabies in cats that had already been vaccinated against rabies with inactivated adjuvanted vaccines.
- Significant booster effect; more marked when the pre-vaccination titres were low.

\textsuperscript{*}PETS changed on 1\textsuperscript{st} Jan 2012. For further information please see the DEFRA website: http://www.defra.gov.uk/wildlife-pets/pets/travel/

\textsuperscript{**} Based on currently available efficacy data showing a risk of interference, the administration of MERIAL non-adjuvanted vaccine against feline leukaemia is not recommended within 14 days before or after vaccination with this vaccine.

Multicentric field study (15 veterinary clinics) on a large scale (180 cats with a mean age of 7 months) conducted under recommended conditions of use for PurevaX rabies, as a diluent for PUREVAX RCPCh\textsuperscript{**}.

- 4 weeks after the vaccination, 97% of these cats had seroconverted.

- Mean Rabies Ab Titer (IU/mL)