

The F9 strain in Nobivac cat vaccines.

A UK feline vaccine strain that's been
tested against recent UK strains



the future of vaccination



Feline calicivirus

Feline calicivirus (FCV) is a single stranded RNA virus, which can mutate rapidly. As a result, new field strains are continuously emerging. Therefore, FCV vaccines should be monitored for their ability to protect cats against current UK isolates of FCV. Because of the multitude of field strains, challenge trials are impractical for comparing the ability of different vaccines to protect against current field strains. For this reason, cross-neutralisation tests are often used to compare different vaccine strains against a panel of FCV isolates from the field.

Cross neutralisation testing

To provide a fair test of the ability of an FCV vaccine to offer cross-protection against different field strains, a cross-neutralisation test should meet a number of criteria.

- To give a prediction about the cross-protection against **current** strains, the panel of FCV strains should be **recent**
- To give a prediction about suitability of the vaccine to be used **in the UK**, the test should be carried out with a panel of **UK strains**
- To **avoid a bias** against a vaccine strain commonly used in the UK, the test should be carried out with strains isolated on an **at random basis** from the cat population

Selection of the strains used for the cross-neutralisation tests

Strain selection for the trials presented in this brochure was carried out by the University of Liverpool. One practice was randomly chosen from the RCVS register of practices for each of the 75 regions in the UK. Each practice was asked to obtain a swab from the next 20 cats presented to their surgery.

Samples were obtained from 62 practices. A total of 1211 samples was received. FCV was isolated from 117 (9.7%) of those 1211 samples. Forty of these 117 isolates were randomly selected for the cross-neutralisation test.

Liverpool cross-neutralisation experiment¹

The 40 isolates were then used in VN tests against 2 different antisera, one derived from FCV strain F9 and the other from FCV strain 255.

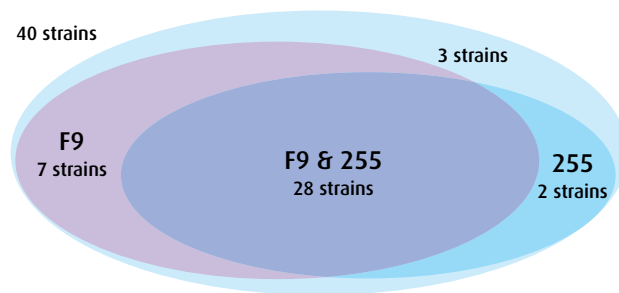


Figure 1:
Neutralisation pattern of strain F9
and strain 255 vs. 40 UK isolates

FCV Serum	% of UK isolates neutralised
F9	88%
255	75%

Table 1:
Neutralisation percentage of strain F9
and strain 255 vs. 40 UK isolates

Overall, the antisera showed similar cross-reactivity, with F9 antisera neutralising 35 (88%) and 255 antisera 30 (75%) of the 40 isolates tested. As can be seen, the F9 vaccine neutralised the largest selection of UK isolates.

Intervet cross-neutralisation experiment²

In a second experiment², the same 40 isolates were tested in a VN test against 2 different antisera. One serum was raised by vaccinating a cat four times with FCV strain F9 via the s.c. and i.n. route. The other serum was raised against FCV strains G1 and 431 by vaccinating a cat four times with a combination vaccine containing these 2 strains by the s.c. route. In this trial, the F9 serum neutralised 82.5% of the isolates whereas the combined G1/431 antiserum only neutralised 50% of the isolates.

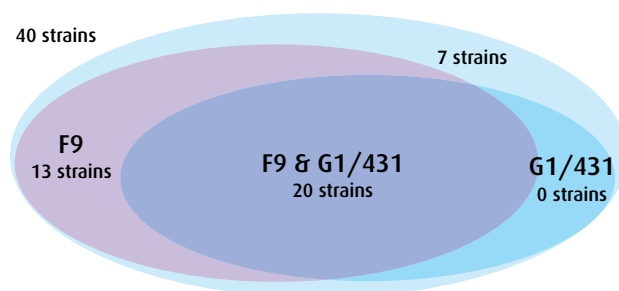


Figure 2:
Neutralisation pattern of strain F9
and strains G1/431 vs. 40 UK isolates

FCV Serum	% of UK isolates neutralised
F9	82.5%
G1/431	50%

Table 2:
Neutralisation percentage of strain F9
and strains G1/431 vs. 40 UK isolates

Only the Intervet range of feline vaccines offers all of the following benefits:

- **Onset of immunity** of 1 week after completion of the primary course³
- **Efficacy in the face of MDA** levels likely to be encountered in the field³
- An injectable vaccine against FHV and FCV that can be used for a **6 week start**⁴
- **Prevention of shedding** of FPL⁵
- Cross protection of the FPL fraction of Nobivac Tricat demonstrated against **canine parvovirus**⁶
- A feline vaccine against ***Bordetella bronchiseptica***

References:

- 1) Porter, C.J., Radford, A.D and Gaskell, R.M. (2006), Comparison of the ability of FCV vaccines to neutralise a panel of current UK feline calicivirus isolates. *Proceedings of the BSAVA Congress*, **49**, 571.
- 2) Intervet study report UKE/0096/06
- 3) Nobivac Tricat Datasheet
- 4) Nobivac Ducat Datasheet
- 5) Nobivac Forcat Datasheet
- 6) Chalmers, W.S.C, Truyen, U, Greenwood N.N, and Baxendale, W, (1999), Efficacy of a feline panleucopenia vaccine to prevent infection with an isolate of CPV2b obtained from a cat, *Veterinary Microbiology*, **69**, 41-45.

Nobivac Ducat is a live attenuated vaccine containing feline herpes virus and feline calicivirus. Legal category POM-V

Nobivac Forcat is a live attenuated vaccine containing feline herpes virus, feline calicivirus, feline panleucopenia virus and *Chlamydophelia felis*. Legal category POM-V

Nobivac Tricat is a live attenuated vaccine containing feline herpes virus, feline calicivirus and feline panleucopenia virus. Legal category POM-V

For further information about the Nobivac® range of cat vaccines, please contact your Intervet account manager

or call the Intervet Veterinary Support Group on 01908 685685, or visit www.intervet.co.uk

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