

## Rabies antibody titration

### *Department Veterinary Medicine*

The following information and legal bases have been compiled with the greatest possible care, taking into account the legal status at the time of preparation of this leaflet. Animal owners are responsible for compliance with the legal requirements. No corresponding guarantee is assumed.

### **In many countries of the world rabies is transmitted from dogs to humans**

In many countries of the world, mainly in Africa and South-East Asia and some South and Central American countries, dog mediated rabies is endemic. The risk of transmission to humans is present. In other countries, e.g. as in northern Asia and large parts of South and Central America dog mediated rabies is rather rare to sporadic or localized.

### **Countries free from dog mediated rabies**

Europe, North America, Australia, New Zealand, Japan and some other countries are free of dog mediated rabies.

### **Preventing rabies introduction**

In order to prevent (re-)introduction of rabies, the EU has adopted regulations to determine conditions for the (re-)entry of pets (dogs, cats and ferrets) from third countries into the EU. Therefore the animal has to be vaccinated against rabies and the success of the vaccination, practically the formation of a defined amount of antibodies, is proven by an antibody titration.

### **Third countries**

The conditions of the EU regulations initially apply to all third countries, except those listed in a specific list (◇ EU 577/2013 Annex II, listed third countries). The listed countries can prove that rabies is controlled and appropriate regulations in their country exist.

If the animal is imported from a listed third country, the animal must be individually identifiable (since 03. July 2011 a microchip is obligatory). Furthermore, an animal health certificate, as well as a written declaration from the pet owner or the accompanying person about the "non-commercial" shipment must be carried and a valid rabies vaccination according to the manufacturer must have been carried out (usually at least 21 days between vaccination and EU entry).

If an animal keeper wants to introduce or re-introduce his pet from a non-listed third country into the EU (e.g. after holiday), the animal must comply with the provisions of **EU regulation 576/2013**.

This regulation only applies to the "non-commercial shipment" of pets, which means the trip does not serve the sale or other transfer of ownership of the animal to another owner.

In addition, the number of animals is limited to five per trip. An exception would only be participation in certain events.

Note: The animal owners are responsible for compliance with the legal requirements regarding entry and exit. No guarantee is given for the success of the entry and/or exit. In case of doubt, animal owners must contact the authorities responsible for entry and exit.

### **Entry conditions for pets into the EU from non-listed third countries**

#### **1. EU pet passport or animal health certificate**

In order to identify and record all necessary information, the animal must be accompanied by a pet passport.

If the animal is born in an EU Member State, it must be accompanied by an EU pet passport.

If born in a third country, it must be accompanied by an animal health certificate. The forms provided for this purpose by the EU are set out in Annex IV, Part 1 of Implementing Regulation (EU) No. 577/2013. Please search on the internet, the forms are available in all European languages.

The pet owner or accompanying person must provide a written explanation of the "non-commercial" shipment. This is set out in Annex IV, Part 3 of Implementing Regulation (EU) No. 577/2013.

#### **2. Identification**

The animal must be identifiable by a transponder / chip.

For animals that have been tattooed before 03.07.2011, the tattoo may apply, provided that it is clearly legible.

#### **3. Rabies vaccination**

The animal must be vaccinated against rabies.

The rabies vaccine used must be:

- an inactivated vaccine, so may not contain live rabies virus
- or
- a recombinant vaccine; here another virus is used as a "ferry" into which the crucial rabies surface protein has been incorporated.
- approved in the country where the vaccination takes place.

The animal must be at least 12 weeks old at the time of vaccination.

The vaccination must be carried out by a veterinarian authorized by the competent veterinary authority.

The vaccination must take place after the attachment of the identification (transponder, tattoo).

The vaccination must be documented by the veterinarian in the pet passport or animal health certificate.



### 3.1 Validity of vaccination

The vaccination is valid from the 21<sup>st</sup> day after vaccination. It lasts as long as the vaccine manufacturer indicates in the package insert of the vaccine. The period of validity of the vaccination must be documented by the veterinarian in the pet passport or the animal health certificate.

## 4. Antibody titration

- a. The blood sample for rabies antibody titration must be obtained from a veterinarian. Sampling is documented by the veterinarian in the pet passport or animal health certificate.
- b. At least 30 days must pass between the last rabies vaccination and blood sampling.
- c. The antibody titration must be carried out by a licensed laboratory (Art. 3 2000/258 / EC)
- d. The measured titer must be at least 0.5 IU/ml.

**Antibody titration is valid life-long for the specific animal, provided it receives booster vaccinations within the validity of the vaccine.**

**The animal must remain in the country of origin for three months before it is allowed to enter the EU. The time counts from the date of blood sampling, which resulted in an antibody titer of at least 0.5 IU/ml.**

### **Conditions for rabies antibody titration at federal institute for consumer protection Saxony-Anhalt, department for veterinary medicine (LAV Stendal)**

#### 1. Blood sample

At least 1 ml serum is necessary for the rabies antibody titration. The serum is the mostly clear, slightly yellowish supernatant after the blood has clotted. So please get 3 - 4 ml of whole blood.

The sample must be taken without anticoagulant as this may adversely affect the test. The sample must be taken as sterile as possible, so that no bacterial growth affects the test.

#### 2. Application form and other documents

The application form provided by our institute ([Untersuchungsanträge für Tierärzte/Tierhalter/Jäger \(sachsen-anhalt.de\)](https://www.sachsen-anhalt.de/Untersuchungsantraege-fuer-Tieraerzte-Tierhalter-Jaeger)) must be filled out completely and signed by the veterinarian for the correctness of data (vaccination, blood sampling, identification) as well as the pet owner for the assumption of costs.



The veterinarian should issue a health certificate for the sample stating:

- a. Name and address of the animal keeper
- b. Identification (chip no./tattoo) of the animal, date of birth, race, sex
- c. Confirmation that the animal was clinically healthy and free from infectious disease at the time of sampling
- d. Nature and purpose of the sample

### 3. Packaging

The sample must be packed leak proof and unbreakable. For this purpose, the blood tube is wrapped in sufficient cellulose paper or kitchen paper and placed in a liquid-tight sealable bag or a rigid screw cap. This can be shipped in a sturdy envelope or small box. Either the second or the third packaging must be rigid and firm.

The sample may be labeled externally with "exempt veterinary specimen" because it is not infectious.

Cooling is not required if transport does not take more than one to two weeks and outside temperatures are not too high.

### 4. Shipping

If the blood sample cannot be brought in person, it must be sent by a courier. The shipper is responsible for proper shipping.

Note regarding sample shipment from abroad:

To simplify customs clearance, the animal keeper must prepare a pro forma invoice for the blood sample as if he were selling the sample to the testing laboratory. Here a small value of goods of maximum 5 € is to be indicated. The pro forma invoice must be attached to the packaging so that it is visible from the outside.

This note is based on the previous experience of the State Office for Consumer Protection with customs clearance. The shipper is responsible for proper customs clearance in compliance with the legal requirements. A corresponding guarantee is not assumed.

### 5. Fees

Currently, the fees for a rabies antibody determination are 65 €.

### 6. The testing

The rabies antibody titration takes three days. We always run the test from Wednesday to Friday. The result is usually finished on early Friday afternoon.

The test is a fluorescence-antibody-virus-neutralization test (FAVN). Here, the serum is diluted in a quadruplicate in log<sub>3</sub> stages. A certain amount of live rabies virus is added to each dilution. The test now has an hour to react. Antibodies present in the sample will attach to the test virus and neutralize it. After the incubation period, virus-susceptible cells are added. The virus has about 48 hours to grow in the cells. Where a sufficient amount of antibodies was present, the virus cannot infect the cells. At the end, the rabies virus is stained with a fluorescent dye and the test is evaluated.



## 7. Notification

Usually, we send the test results by mail to the pet owner and the veterinarian. If fax transmission is required, please specify the fax number and a corresponding note. If a notification of the pet owner by e-mail is required, a corresponding declaration of consent, which is available on our homepage, must be present.

## 8. Veterinary authorities

If no indication of involvement of a veterinary authority is given, it will receive no test results!

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