

Dear dog breeder,

most recently the legal situation for running the MDR1-DNA test has changed due to patent regulations. We would like to take this opportunity to provide you with a detailed update about the changed situation and what this means for you if you would like to submit samples. Furthermore, this newsletter contains information about relevant drugs, the prcd-PRA test and quality management at Laboklin.

Kind regards,



Dr. Elisabeth Müller

MDR1-Genetic Test: Legal Situation

MDR1-Defect: Relevant Drugs

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Accreditation

MDR1-DNA test: Changed legal situation

Since November the 18th the patent protecting the technique of MDR1-DNA testing is in effect in Germany. Because of this changed legal situation, Laboklin will no longer perform the test in Germany. However, we would like to inform you that we can arrange processing of your MDR1 samples through one of our partner laboratories in a neighbouring foreign country without patent restrictions. This laboratory works at the highest quality level according to the guidelines of DIN ISO EN/IEC 17025. As before, the test will identify the mutation nt230-del4 in positive dogs, using a direct genetic test.

Through this collaboration we are able to organise sample processing for this important genetic test for many dog breeds at very advantageous conditions concerning price and turn-around time. Especially members of dog breeding associations can take advantage of our special rebate plans. Please contact us about the different rates available. As before, you can either send an EDTA blood sample or cheek swabs.

Please take into consideration that due to the changed situation the turn-around time of the test has changed. It will take about 5-7 working days to get the result after receiving the sample.

As always, should you have any questions, please don't hesitate to contact one of our specialists. We have prepared an information sheet about MDR1 that summarizes the most important facts you need to know. The information sheet is available for download from our website at www.laboklin.de. You can also order a hard copy directly from us.

The following chapter will cover the most important aspects about drugs being used to treat MDR1 affected dogs.

MDR 1 defect and drugs

Multiple drugs are known to cause Ivermectin hypersensitivity in dogs homozygous for the MDR1 gene defect. Macrocyclic lactones and Loperamid interact with the MDR1-transport molecule and are known to have neurotoxic effects that can lead to death.

Numerous antiparasitaria belong to the group of Avermectines such as Ivermectin, Doramectin, Moxidectin etc. Please make sure that they can be used without reservation regarding their application in dogs with MDR1-defect. Some examples of these drugs are Stronghold®, Advocate®, and Milbemax®. Dosages or applications not in compliance with manufacturers instructions never should be used.

There are many more drugs that have been suggested to interact with the MDR1 transport molecule in cell culture or animal models. Cytostatic drugs, glycosides, antiepileptic drugs, opioids, steroid hormones, antiemetics, antacids, antiviral agents, antibiotics, antimycotics, immune suppressive drugs (cyclosporine) and other e.g. Acepromacin. Most of these drugs have not been tested in clinical trials and only limited information is available about indications and dosages.

In general: In order to assess the individual risk of dogs belonging to breeds known to be affected by the mutation, we recommend to test for the MDR1 genetic defect. Dogs that test positive for the mutation should never be treated with any of the drugs mentioned above without veterinary advice. This applies to dogs that are homozygous as well as heterozygous (carrier) for the mutation. If the status of an individual animal is known, the dosage of drugs bearing a risk can be adjusted accordingly, or alternative drugs can be used. In order to avoid intoxications, manufacturer's instructions with regard to dosage and mode of application should be followed closely.

Accreditation: What does that mean?

Since 2003 Laboklin is an accredited laboratory according to DIN EN ISO/IEC 17025 (accreditationnr. AKS PL 20922) including the complete test panel. The assessment of laboratories is performed by an independent group of experts in the field and confirmed a high quality standard and competence for more than 150 molecular biological tests offered by the Laboklin laboratory. The accreditation of Laboklin laboratory is in compliance with international standards. The state owned accreditation office is responsible to assess and monitor the quality of performance of the most important laboratories throughout the country and is an independent agency, not associated with any commercial or private agencies. This ensures high quality standards of accredited laboratories at all times, something you can count on!

Furthermore, Laboklin participates successfully in an independent quality control management organized by e.g. INSTAND e.N., which is a reference institute belonging to the Chamber of Veterinarians in Germany (Bundestierärztekammer.de). This control system conducts comparisons of analyses between different accredited laboratories, including all areas of analytic tests.

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We also have news for you concerning the prcd-genetic test that is also under patent protection: Independent from the possibility to send your samples to Optigen (USA), we can also offer you the analysis in one of our partner laboratories that are not restricted by patent regulations. According to DIN ISO EN/IEC 17025 a direct genetic test is performed to detect the mutation ensuring the highest quality level.

The turn-around time for this test could be shortened significantly to 1 week max. after we received your sample. We already agreed on special rebates for members of various breeding clubs and associations and you should contact us if your breeding club is not included yet.

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Prcd-PRA-Genetic Test: Shortened turn-around time